

BUSINESS PLAN FOR THE ESTABLISHMENT OF THE AEROTROPOLIS INSTITUTE AFRICA

Affiliated to:

The University of KwaZulu-Natal (UKZN)



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SECOND DRAFT REPORT

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Glossary of Terms

AASA	Airline Association of Southern Africa
ACI	Airports Council International
ACSA	Airports Company of South Africa
AFCAC	African Civil Aviation Commission
AFRAA	African Airlines Association
AIA	Aerotropolis Institute Africa
ASM	Airport Strategy and Marketing
ATCs	Air Traffic Controllers
ATNS	Air Traffic Navigation Services
BARSA	Board of Airlines Representatives of South Africa
BRICS	Brazil, Russia, India, China and South Africa
CAA	Civil Aviation Authority
CAAB	College Academic Affairs Board
CAAS	Civil Aviation Authority of Singapore
CAPRISA	Centre for the Aids Programme of Research in South Africa
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CHE	Council for Higher Education
CIPR	Companies and Intellectual Property Commission
CMC	College Management Committee
COMESA	Common Market for Eastern and Southern Africa
CSIR	Centre for Scientific and Industrial Research
DHET	Department of Higher Education and Training
DTI	Department of Trade and Industries
DTPC	Dube Trade Port Corporation
DVC	Deputy Vice Chancellor
EAC	East African Community
ECCAS	Economic Community of Central African States
ECOWAS	Economic Community of West African States
EMC	Executive Management Committee
ETDP	Education Training and Development Practices (SETA)
FET	Further Education Training College
GDP	Gross Domestic Product
HEI	Higher Education Institution
HEQC	Higher Education Quality Committee
HR	Human Resources
IATA	International Air Transport Association
IATF	International Airline Training Fund
ICAO	International Civil Aviation Organisation

ICT	Information, Communication and Technology
IP	Intellectual Property
IPR	Intellectual Property Rights
ITDI	IATA Training and Development Institute
IUPUI	Indiana University Purdue University Indianapolis
JICA	Japan International Cooperation Agency
KSIA	King Shaka International Airport
KZN	KwaZulu-Natal
KZN EDTEA	KZN Department of Economic Development, Tourism and Environmental Affairs
LCCs	Low Cost Carriers
MATA	Mega Aero Training Academy
MBA	Master of Business Administration
MOI	Memorandum of Incorporation
MOU	Memorandum of Understanding
MRO	Maintenance, Repairs and Overhauls
NAC	National Aerospace Centre
NDoT	National Department of Transport
DPE	Department of Public Enterprises
NPC	Not for Profit Company
NQF	National Qualifications Framework
NSF	National Skills Fund
PAYE	Pay As You Earn
PBAs	Public Benefit Activities
PBO	Public Benefit Organisation
PGDP	Provincial Growth and Development Plan
PhD	Doctor of Philosophy
R&D	Research and Development
SAA	South African Airways
SAAT	South African Airways Technical
SACAA	South African Civil Aviation Authority
SADC	Southern African Development Community
SAPOA	South African Property Owners Association
SAQA	South African Qualifications Authority
SARS	South African Revenue Services
SETA	Sector Education Training Authority
SEZ	Special Economic Zones
SFTPs	Self Funded Teaching Programmes
SMRI	Sugar Milling Research Association
SOEs	State Owned Enterprises
TETA	Transport Education and Training Authority
THD	Tongaat Hulett Developments
TIACA	The International Air Cargo Association
TIKZN	Trade and Investment KZN
TVET	Technical and Vocational Education and Training
UAVs	Unmanned Aerial Vehicles (Drones)

UCT	University of Cape Town
UEL	UKZN Extended Learning
UIF	Unemployment Insurance Fund
UKZN	University of KwaZulu-Natal
UNC	University of North Carolina
UNSW	University of New South Wales
USAID	United States Agency for International Development
UWC	University of Western Cape

SECOND DRAFT

Executive Summary

AIA Strategic Approach, Vision and Mission

The AIA faces a number of strategic choices, namely; to contribute to the body of knowledge on aerotropolis and mainstream aviation industry through research and development; collaborating and partnering with local, international and continental institutions to deliver educational programmes that will develop an aerotropolis human capital; utilising the global panel of aviation and aerotropolis experts to develop thought leadership; and to advocate for policy shift in support of air transport liberalisation initiatives.

The strategic approach of AIA in relation to research will be to prioritise research projects in aerotropolis and aviation-related areas for which there is very little or no body of knowledge, develop research proposals and identify research partners (such as industry players, bodies, other local and international HEIs, research institutions, etc.), solicit funding and execute these research projects, and finally publish research outcomes as academic journals and in other platforms like aviation seminars and conferences. In terms of educational programmes, the AIA will develop programmes on a collaborative basis rather than develop new ones from scratch, explore joint degree programmes in the initial stages, and customise and align UKZN existing degree programmes to include aerotropolis and aviation modules that can be offered in collaboration with other international HEIs identified in the feasibility study.

In terms of the Vision of the AIA, the proposed Vision is: ***The Aerotropolis Institute Africa will become a 'centre of excellence' and hub for aerotropolis knowledge in Africa and ensure development of skills within Africa to support growth and expansion of the Durban Aerotropolis and aerotropoli globally.***

The mission statement of the AIA is: ***The AIA will provide quality aerotropolis and related aviation-industry educational qualifications and research to Africa and the world, and through its affiliation to UKZN and partnerships with educational and research institutions, aviation and related industries, and government, will become the leading aerotropolis skills and knowledge development institute on the continent.***

Institutional Considerations

UKZN's Policy notes that an institute is a separate legal persona that is financially and legally independent, with its own Board of Control, and is associated with the University by formal agreement. Staff of the University may participate in the activities of the Institute and Staff of the Institute may hold honorary positions in the University and may co-supervise research students. As such, an Institute of UKZN is the optimal structure as this allows the AIA to be independent from (but still affiliated to) UKZN and generate its own operational funding. It also allows the AIA access to benefits associated with being an Institute of UKZN such as outsourcing of staff, educational and research offerings; contracting the University to provide managerial, financial and administrative services; and benefiting from established systems, procedures and policies.

Core AIA Offerings

Short Courses (2017 onwards)

The AIA will offer a variety of 3 to 5-day certified short courses on aerotropolis-related topics, which will target approximately 60 students per short course. These courses will be offered in partnership with the UKZN Extended Learning (UEL) and other organisations that do similar programmes (outsourced), including international organisations such as IATA and ACI. These short courses can start to be offered internally (insourced) as the AIA matures and sufficient internal capacity has been developed. In year 1 and 2, the AIA will offer the short courses: 1) Aerotropolis Master Class; 2) Air Services and Route Development; and 3) Air Cargo Professional Development.

Research (2017 onwards)

The AIA will offer opportunities to conduct both theoretical and applied research that contribute to the development and enhancement of knowledge and skills in relation to Aerotropoli. Research will be both outsourced to UKZN and other research institutions, and insourced at a stage when the AIA has developed sufficient internal capacity. In the first 2 years, the AIA will focus on research in areas as identified in the Nice Focus Areas (see upcoming sub-section).

Postgraduate (2019 onwards) and Undergraduate (2021 onwards) Programmes

The AIA will offer postgraduate and undergraduate qualifications through UKZN and in partnership with another universities either locally or internationally. As noted, the AIA will

develop programmes on a collaborative basis rather than develop new ones from scratch, exploring joint degree programmes and customisation and alignment of UKZN existing degree programmes. Postgraduate qualifications relate to masters degrees, postgraduate diplomas, MBAs, and doctorates (PhDs) while undergraduate qualifications comprise of either degrees or diplomas.

Potential and Niche Focus Areas

The feasibility study identified **8 broad potential focus areas** for the AIA, which are identified below:

1. Airport and Airline Management and Operations
2. Airline Industry Economics
3. Airport/Airport City Environmental Management
4. Aviation Law and Regulations
5. Airport City / Aerotropolis Master Planning
6. Transport, Logistics and Supply Chain Management and Planning
7. Airport-linked Commercial Development and Marketing
8. Aeronautical Engineering and Technical

Unpacking these broad categories further identified a full range of skills that are required in order to develop effective aerotropoli. Based on the list of potential focus areas above (and the various skills within each of these), demand from aviation and related industries, and requirements from the perspective of aerotropoli development, the following **10 niche focus areas** were identified for the AIA during its establishment phase, which will be used to guide research and short course offerings:

1. Route and Air Traffic Development;
2. Airport City / Aerotropolis Master Planning and Design;
3. Aviation Economics;
4. Air Cargo Logistics;
5. Airport Management;
6. Smart Airports and Airport Cities;
7. Airport Environmental Planning and Sustainability;
8. Aviation Policy and Regulations;
9. Airport Infrastructure Planning;
10. Seaport-Airport Synergies.

Industry and Competitor Analysis

Aerotropolis education, training and skills development programmes are currently fragmented, both nationally and internationally, as most institutions only offer aerotropolis-related programmes as components of various technical and commercial degrees/diplomas, short courses, or technical training programmes, with no dedicated aerotropolis programmes currently identified during the Feasibility Study. There is currently no integration of the various specialities that brings these skills from ‘inside’ and ‘outside’ of the airport fence together, to guide aerotropolis and airport city planning. Optimal planning and implementation of an aerotropolis development requires a broad range of skills over and above the core aviation and related industry skills, which include intermodal transport and logistics, supply chain management, urban and town planning, property development, sustainability planning, infrastructure development, place marketing, etc. In terms of the current industry and potential competitors to the AIA, the skills supply can be categorized into commercial and management, technical and engineering, and built and natural environment programmes.

Commercial and Management Programmes include skills such as aviation management and operations, supply chain and logistics, economics, law and regulation. These programmes are offered extensively at an international level; however, there is a limited aerotropolis and aviation-related focus nationally. **Technical and Engineering Programmes** include skills such as engineering, science, MRO, technicians, ATCs, ramp & passenger handling, and ground control. Both internationally and nationally, these skills are offered extensively. **Built and Natural Environment Programmes** include skills such as airport & town planning, wildlife science, environmental sustainability, meteorology, etc. There is currently a limited supply of these skills both internationally and nationally with an aerotropolis and aviation-related focus. From a research perspective, limited aerotropolis and/or airport city planning research is being undertaken nationally and internationally, with the majority of research in South Africa currently focusing on aerospace and aeronautical engineering.

Statutory Registrations

The name of the Institute has already been reserved as “Aerotropolis Institute Africa”. The Institute will be registered as an NPC. This registration will commence in January 2017 and is expected to be finalised by 01 April 2017. The AIA will be registered as Public Benefit Organisation as defined in Section 30(1) of the Tax Administration Act 28 of 2011 and will be

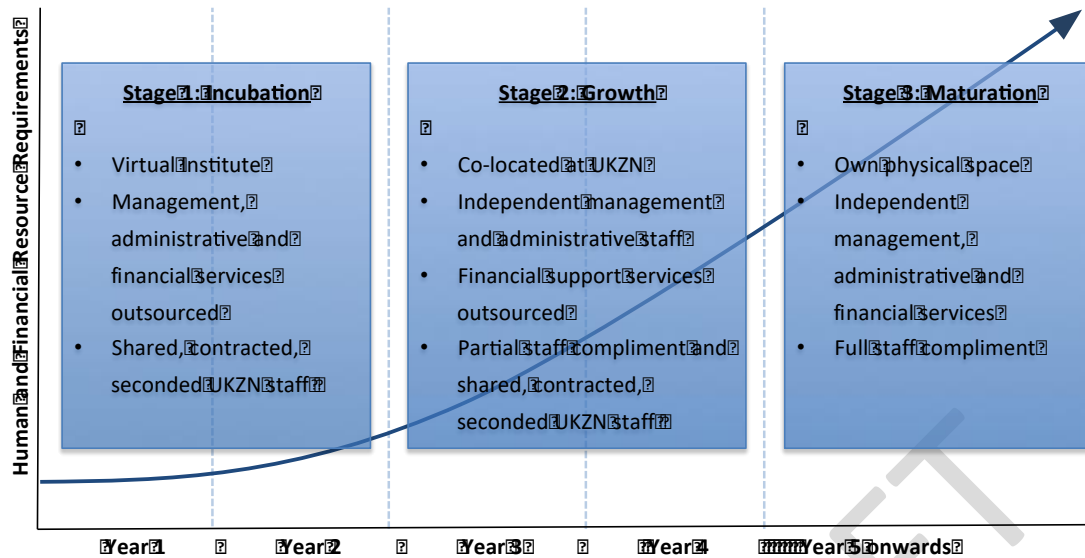
exempt from income tax. Once this registration has been completed the AIA will be empowered to issue Section 18A receipts for all donations received and used for approved PBAs, which include “education and development”.

UKZN Establishment Process

UKZN’s ‘*Guidelines for Decision Flow of Academic Matters*’ states that in terms of establishment of Research Institutes, the DVC (Research Office) must make a recommendation (in consultation with the Research Strategy Group) to the College Academic Affairs Board (CAAB). Before submitting to the Senate, the CAAB must then make a recommendation to the Executive Management Committee (EMC). The EMC will then make recommendations to the Senate, who thereafter, will hand over final recommendations to Council, for final decision in the matter of Institute establishment. On the relationship between the University and Institute, the *Policy* stipulates that this relationship will be defined by contract, which will be for a given period (normally five years), and renewable subject to review based on a number of considerations specified in the *Policy*.

Stages of Development

The feasibility study concluded that the AIA be established as per the operational structure which allows the institute to grow under the auspices of the University, with all educational and research offerings outsourced to UKZN (and UEL), and the staffing outsourced to the University. The optimal (long-term) position of the AIA is a fully independent but UKZN-affiliated institute that can undertake and generate substantial research outputs and provide postgraduate and undergraduate qualifications and short courses, while the practical and viable establishment option is to be fully outsourced to UKZN. **As such, it is recommended that a ‘hybrid’ approach be adopted in terms of AIA establishment in which the AIA transitions from the Incubation towards Maturation.** The graph below displays the three Stages of Development of the AIA based on these recommendations:



Outsourcing and Shared Services

During the incubation stage within UKZN, all other administrative (including payroll), management and financial services being outsourced to UKZN besides a shared General Manager and dedicated Administrative officer. During the growth stage, the institute will undertake its own management and administrative functions, with the financial management and payroll functions remaining as an outsourced service of UKZN. From the maturation stage, the AIA will take over all these functions and as such will no longer outsource any to UKZN. Some staff members will still be shared, contracted, or seconded from UKZN while most educational offerings (postgraduate, undergraduate qualifications and research) will still be outsourced to UKZN. As such, the AIA will sign Memorandum of Agreements (MOUs) with UKZN and UKZN Extended Learning (UEL) during the establishment phase.

Course Development

Postgraduate and undergraduate programme development and accreditation is guided by the policy of The South African Qualifications Authority (SAQA), namely, the *'Policy and Criteria for the Registration of Qualifications and Part Qualifications on the National Qualifications Framework'*, as well as the Council of Higher Education (CHE) Higher Education Quality Committee (HEQC) *'Criteria for Programme Accreditation'*. Internally, UKZN programmes follow the processes as identified in UKZN's *'Guidelines for Decision Flow of Academic Matters'*, which identify basic principles which guide academic decisions. The decision flow provides the process that needs to be followed approval of a **new qualification or programme that needs accreditation** (new qualification type, designator or qualifier or

where there is >50% change) and a new **major, stream or specification in an existing approved programme or qualification** (same qualification, designator and qualifier). **Short course development** is guided by UKZN's '*Policy on Self-Funded Teaching Programmes*'. The AIA will also provide both postgraduate and undergraduate qualifications as collaborative (joint or co-badged degrees) programmes through partnerships with national or internationally universities.

Research and Development Operations

Various research options will be explored by the AIA. One option is to identify research topics, develop research proposals, and present these to UKZN Schools and/or Colleges and other universities and research institutions (or put out a call for research in relation to these topics/research proposals). Additionally, the AIA can pitch various research proposals to industry stakeholders who might require research to be undertaken, and these stakeholders can contract the AIA to undertake this research on their behalf. These same research proposals can be utilised to apply for grant funding for aerotropolis research through various funding agencies. The consortium model will also be explored. Through engagements with stakeholders the AIA can identify possible stakeholders to form a consortium. These stakeholders will pay a subscription fee and an agreement can be reached between the consortium and the AIA in terms of research outputs.

Business Premises

During incubation the AIA will outsource all its operational and educational activities to the university and as such does not require dedicated premises, and will share the current office facility of UKZN InQubate. As the AIA transitions further into the growth stage and dedicated staff is employed, the AIA will identify space within the current UKZN structures and be co-located within UKZN. When the AIA reaches maturation, a dedicated AIA premises will be rented which will consist of offices, lecture theatres, and boardrooms, which will be able to accommodate a full staffing and student compliment. The AIA will still however retain a strong physical presence at UKZN in light of the Institute's affiliation.

Marketing Overview and Differentiation

It is imperative that the AIA be uniquely positioned as filling a gap in the market place rather than offering the same programmes that are currently on offer from the industry players. The most **unique selling point** or **value proposition** for the AIA is that it will *combine skills*

sets that support businesses inside and outside the airport fence. This in essence is the foundation premise on which the aerotropolis concept is based.

Marketing Mix – Product, Price and Place

Short Courses: AIA will solicit sponsorships for bringing international presenters so that it can keep the costs per participant in the region of R12,000, and during the incubation stage short-courses will be offered at UEL. **Research:** AIA will retain 20% of all funding raised for research and will pay the remaining 80% to the entity that will be carrying out the research. During the incubation stage the AIA will be relying primarily on UKZN capacity to execute its research projects, and as such research will be undertaken at UKZN campuses. As the AIA moves from incubation to growth stage it will explore other opportunities like the use of online platforms to deliver the courses, and material can be delivered through webinars and pre-recorded or live video links. **Postgraduate and Undergraduate Programmes:** The pricing of formal degree programmes will in accordance with the fee structures of UKZN and other partner universities and institutions (approximately R35,000). The AIA will add a 20% management fee on all programmes. As programmes will be offered through UKZN and other partner institutions, these programmes will be carried out on UKZN and other partner campuses/premises.

Marketing Mix - Promotion

The AIA's promotional mix will entail the use of various tools as identified below:

Corporate Identity & Branding	<ul style="list-style-type: none"> • AIA corporate identity to be developed • Branding such as stationery, banners, backdrops, flyers, brochures, corporate gifts
Advertising	<ul style="list-style-type: none"> • Develop a message centred on the AIA's value proposition (training and research) • Media such as TV, print, mail, social media, radio, outdoor, internet
Sales Promotion and Personal Selling	<ul style="list-style-type: none"> • Develop a database of potential stakeholders involved in airport or aerotropolis projects • Engage with stakeholders to sell programmes and present research projects
Public Relations	<ul style="list-style-type: none"> • Industry talks, conferences and seminars, publications, guest lecturers, UKZN Open Days

Stakeholder Partnerships and Collaborations

Building strong relationships and partnerships with stakeholders is critical for the success of the AIA, in that the Institute will need to leverage off these relationships and partnerships in order to provide guided educational programmes and research, as well as other mutually-

beneficial supporting activities. The stakeholders and potential partnerships are identified below:

Stakeholders	Potential Partnerships
International Educational Institutions Embry-Riddle; Delft University of Technology, etc.	<ul style="list-style-type: none"> • Offering of short courses, modules or full degrees through partnerships (joint degrees) • Online learning • Research partners • Peer review of AIA curriculum and offerings • Source of guest lecturers/presenters
National Higher Education Institutions Wits; University of Pretoria, MUT, etc.	<ul style="list-style-type: none"> • Offering of modules or degrees through partnership (joint degrees) • Research partners • Decentralised locations for AIA online learning
Other National Training Institutions ACSA Academy; SAA Technical, ATNS, etc.	<ul style="list-style-type: none"> • Training partners in their area of expertise (technical training)
International and National Aviation and Related Industry Associations and Organisations IATA, ICAO, ACI, etc.	<ul style="list-style-type: none"> • Offering of certified short courses or diplomas in partnership • Industry communication and linkages • Research partners
Industry (Airlines; airports; property developers; transport and logistics; ground handling etc.) ACSA, ATNS, DTP, THD, etc.	<ul style="list-style-type: none"> • Industry communication and linkages • Skills absorption
Public Sector DOT, DHET, EDTEA, etc.	<ul style="list-style-type: none"> • Industry oversight • Skills monitoring • Skills absorption

Management Board of Directors and Advisory Board

The fiduciary duties of the board of directors will entail the managing the assets of the organisation and is expected to act in the best interest of the organisation. In performing their duties, members of the board are expected to exercise due care, skill and diligence. The appointment of directors to the board will be on the basis of skills and experience required to fulfil the mandate and the vision of the AIA. To maintain a balance of power, the composition of the board will be such that the majority of board members will be non-executive and independent of UKZN. The AIA will have a minimum of three directors and more will be added as per the requirement of certain skill sets and experience.

The AIA board will appoint an international panel of advisors who will assist the board in staying abreast of international developments and also to manage relationships with international partner organisations and institutions. Members of this Advisory Board could be drawn from the following organisations:

- KZN Government;

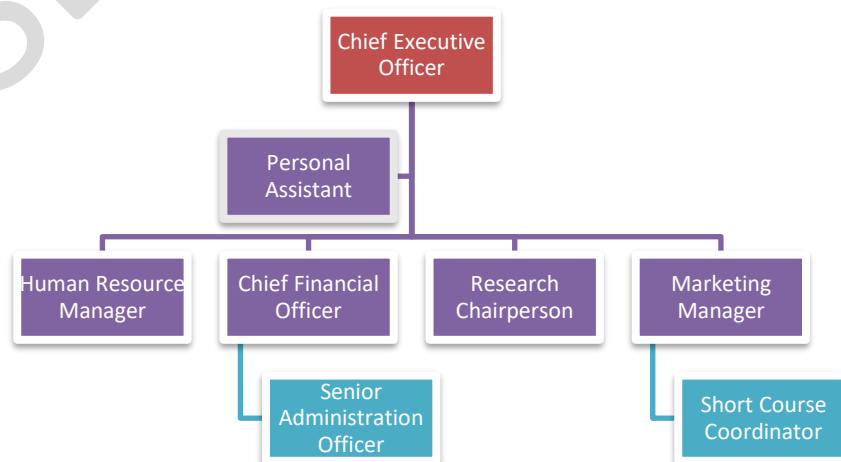
- Department of Higher Education;
- UKZN;
- Other Aerotropolis Institutes (Chinese and India);
- Local and international institutions;
- Industry Bodies - IATA, AFRAA, ACI, ICAO, etc.;
- Stakeholder Entities - ACSA, SAA, ATNS, etc.;
- Research Institutions;
- Business Chambers; etc.

In fulfilling its mandate the board will establish board committees to which it will delegate certain functions but without abdicating its responsibilities. The aim of these committees will be to relieve the board of its workload and the AIA board will establish the following committees:

- Remuneration Committee
- Research Committee
- Course Development Committee
- Audit Committee
- Finance Committee

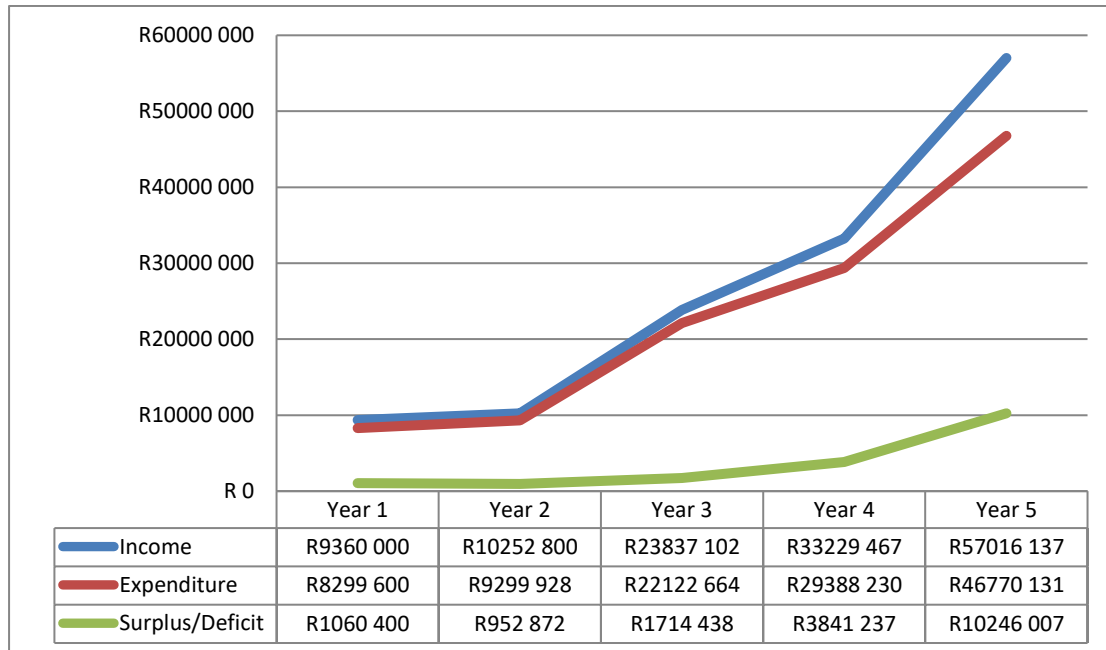
Management and Operational Staff

Other than the three non-executive directors, the AIA will only appoint an Administration Officer and a General Manager (shared with UKZN) during the incubation stage. As the AIA enters the growth stage, a Chief Executive Officer will then be appointed along with some senior managers, who will include the Chief Financial Officer, a Research Chairperson, Marketing and Sales Manager, and a Short Course Coordinator. In the maturation phase, when the AIA takes over the payroll, an HR Manager will be appointed. The organogram below displays the HR structure of the AIA in its maturation stage.



Financial Model

A number of assumptions are put forward within the business plan of the AIA in order to determine parameters for development of an accurate financial model. The projected income will be modest in the first two years whilst the AIA is developing educational programmes and research projects. However in the third year, the Institute will have developed its internal capacity to deliver some of its educational programmes and research projects that will increase its income and expenditure. This is displayed in the graph below:



The breakeven point refers to the level of turnover where the expected gross income is equal to the estimated operating costs. The breakeven point for the AIA in the first five years based on the above financial projections can be calculated as follows:

Breakeven Analysis	Year 1	Year 2	Year 3	Year 4	Year 5
Gross Income	R2 832 000	R3 010 560	R14 709 001	R19 903 969	R33 511 974
Gross Margin %-age	30%	29%	62%	60%	59%
Operating Expenses	R1 771 600	R2 057 688	R12 994 563	R16 062 732	R23 265 968
Breakeven Turnover	R5 855 288	R7 007 687	R21 058 719	R26 816 563	R39 583 929

The breakeven turnover is minimum income that the AIA will have to raise in order to break even. During the first year, the AIA will have to raise R5.9 million, R7 million in the second year and so forth. Given the fact that R1.2 million has already been secured in each of the first two years, the minimum income that will have to be raised in the first two years is R4.7 million and R5.8 million respectively.

Other than income from short courses, the AIA has the potential to generate income during its start-up phase through funding channels such as UKZN Foundation; National Research

Foundation (NRF); Technology Innovation Agency (TIA); National Department of Science and Technology (NDST); and USAID; to name a few.

Implementation Plan

The establishment of the AIA is expected to be completed by March 2019, which will provide an opportunity for the AIA to test the assumptions on which the financial projections are based. It is therefore necessary to have these assumptions reviewed during the fourth quarter of the first year of operation. The table below provides a breakdown of the key deliverables and milestones that the AIA wishes to achieve:

Deliverables and Milestones	Due Date	Year				
		1	2	3	4	5
Appointment of Board of Directors	31 January 2017	█				
Memorandum of Incorporation	31 January 2017	█				
Appointment of General Manager and Administrator	28 February 2017	█				
Registration of the NPC	28 February 2017	█				
College Academic Affairs Board Approval	28 February 2017	█				
Executive Management Committee Approval	28 February 2017	█				
Presentation of final draft of Business Plan to stakeholder and solicitation of their support and commitment	28 February 2017	█				
Senate Approval	15 March 2017	█				
Council Approval	31 March 2017	█				
Opening of a Bank Account	31 March 2017	█				
First Short Course	01 April 2017	█				
First Research Project	01 April 2017	█				
SARS registrations (PAYE, PBO Status)	31 December 2018		█			
Appointment of CEO and additional staff	01 March 2019			█		
UKZN Postgraduate programme	01 April 2019			█		
Appointment of final staff	01 March 2020				█	
Joint Postgraduate programme	01 April 2020				█	
UKZN Undergraduate programme	01 April 2021					█
Joint Undergraduate programme	01 April 2021					█

1 Introduction and Background

1.1 Background to the AIA Establishment

In October 2014 the Executive Council of the KwaZulu-Natal Provincial Government approved the KZN Integrated Aerotropolis Strategy. This Strategy was aligned to the Province's Vision 2030, the Provincial Growth and Development Strategy (PGDS). The PGDS seeks to promote the KZN Province into becoming globally competitive in line with the National Development Plan of National Government. Both the PGDS and the KZN Integrated Aerotropolis Strategy emphasise the need for skills development of KZN citizens to meet the future demands of the KZN economy in general. One of the 10 strategic levers of the KZN Aerotropolis Strategy is Knowledge Support of the KZN Aerotropolis Development, and this is the basis for the establishment of the Aerotropolis Institute Africa.

The KZN Aerotropolis Strategy highlighted some of the challenges that exist in relation to development of an Aerotropolis in KZN. Specifically, there is very limited aerotropolis expertise within the country and currently there are no tertiary institutions that offer programs that are dedicated to aerotropolis development. Most tertiary institutions in the country and those visited during the benchmarking tour offer a number of aerotropolis related courses but in a fragmented way. For instance, one would find programs that are related to core aviation and aerospace engineering and in other faculties within institutions there could be programs that address generic built environment and master planning. This situation could be attributed to a still fragmented market that does not combine functions within and outside the airport fence. For this reason, the AIA will have to develop integrated aerotropolis programs that are focussed on aviation related development in and around a major airport hub.

Civil aviation authorities in other parts of Africa are struggling to mobilise the funding for airport development to meet the demands of the new generation of aircraft. Furthermore, aeronautical revenues are under pressure because airlines are constantly demanding huge financial incentives in the form of reduced landing charges. The only viable and sustainable sources of funding for these airports are those from non-aeronautical revenues, which can be sourced from commercial development in and around the airports. This is the essence of an aerotropolis development intervention. In order to develop very strong and viable

aerotropoli and airport cities, authorities managing major international airports will need to attract and retain highly skilled labour.

For long-term sustainability, the Aerotropolis Institute Africa should go beyond addressing the skills gaps for KZN, but rather contribute to meeting the needs of the whole country and the continent of Africa. In fact the AIA should provide thought leadership and the unique skills sets required for the development of the African aerotropoli. In strengthening its skills offerings the AIA would use the development of the Durban Aerotropolis to provide practical experience to its students. The KZN Government and its partners could still develop the Durban Aerotropolis without establishing the Aerotropolis Institute Africa, however, this would only be possible through an influx of skills from other parts of the country, given the limited skills within the province. Even nationally and internationally the skills sets required for advancement of the aerotropolis concept are scarce, given the growing global demand for such skills. Furthermore, the KZN Government could miss out on an opportunity to build a knowledge economy around aerotropolis training to meet the skills demand of the African continent, developing regions and BRICS economies.

The development of an aerotropolis requires a very unique set of skills that go beyond just core aviation, property development and logistics. Strategic Lever V of the KZN Integrated Aerotropolis Strategy seeks to address the skills gaps in these key sectors within the KZN Province. The strategic goal of this Lever is as follows: ***Optimum knowledge support, thought leadership and human capital that meet the industrial and commercial needs of the growing Durban Aerotropolis with the potential to export such skills and knowledge.*** It can be gleaned from this strategic goal that the focus is not only to meet the skills demand of the Durban Aerotropolis, but also to build a very strong knowledge base and thought leadership throughout the continent

1.2 Purpose and Structure of this Report

This Business Plan is the culmination of a Feasibility Study that was undertaken to test, inter alia, the financial and economic viability of the AIA, operational scenarios and demand / supply analysis, etc. The purpose of this Report is to present a Business Plan for the establishment of the Aerotropolis Institute Africa, in order drive implementation of the AIA. The Business Plan report contains the following information, broken down into the following sections:

- **Section 2: Status Quo Assessment**
- **Section 3: AIA Strategic Vision**
- **Section 4: Governance Structure**
- **Section 5: Operational Plan**
- **Section 6: Marketing Plan**
- **Section 7: Human Resources Plan**
- **Section 8: Financial Plan**
- **Section 9: Implementation Plan**

2 Status Quo Assessment

2.1 State of the Global Aviation Industry

Globally, about 1% of GDP is spent on air transport, which equated to approximately \$750 billion in 2015. Total global freight volumes increased from 51.5 million tonnes in 2014 to 52.2 million tonnes in 2015, a 1.5% change year on year, while global passenger departures increased from 3,3 billion in 2014 to 3,5 billion in 2015, a 7,2% increase year-on-year. In terms of the cost of an average return fare, in 2015 it was \$407 per person, which was down from \$472 in 2014, and 57% less than in 1995. In addition, the cost per kilogram of air cargo was \$1,8/kg in 2015, down from \$2,22/kg in 2014 and 61% compared to 1995. This indicates that air transport is becoming more affordable from both a passenger and freight perspective¹.

As the demand for skills within the aviation and related industries is driven by demand for air and freight transportation, this indicates that as price continues to become more competitive, more passengers and cargo will be transported by air and as such, skills demand continues to grow. However, economic activity globally continues to be relatively fragile with global GDP growth and global trade growth down to 2,4% and 1,6% in 2015 from 2,6% and 2,9% in 2014 respectively. As such, business confidence continues to be weak in both emerging and advanced economics, while "airline CFOs and heads of cargo reported in April that they had become more positive about future growth in air travel, but were less positive about cargo²."

¹ IATA Economic Performance of the Aviation Industry, mid-year 2016. www.iata.org/economics

² IATA Economic Performance of the Aviation Industry, mid-year 2016. www.iata.org/economics

From a trade perspective, IATA indicates that air transport is “vital for manufacturers trade”, with the value of trade carried in 2015 amounting to some \$5,580 billion, down from 2014 due only to the stronger dollar, while the value of tourist spend was \$665 billion in 2015. In terms of employment, IATA estimates that in the air transport supply chain, approximately 62,7 million jobs were supported by the air transport industry in 2014³.

The African aviation industry supports 6,8 million jobs and generates \$72,8 billion in economic activity in the continent⁴. African airlines carried a total of 76.6 million passengers in 2014, an increase from 73.8 million in 2013. In 2014, 46.8 million passengers were recorded on international routes while 29.8 million were domestic⁵. Within the South African context, according to ACSA⁶ total passenger departures through South African airports increased from 17,8 million in 2014/2015 to 19,3 million in 2015/2016, an increase of 8,4% year on year. International departures contributed 5,3 million in the 2015/2016 financial year, up only 3% from 5,19 million in 2014/2015.

In terms of the 22 African Airlines Association (AFRAA) airlines that reported their passenger numbers, a total of 50.03 million passengers were carried on 2014 with the top 5 passenger-carrying countries being South Africa, Egypt, Morocco, Nigeria and Algeria⁷. In spite of these figures, the African industry recorded losses of \$700 million in 2015, with this loss expected to decline to \$500 million in 2016, indicating a slight improvement (although still negative). The challenges identified by IATA for African airline include “intense competition on long-haul routes, political barriers to growing intra-Africa traffic, high costs and infrastructure deficiencies⁸”. Despite all this, IATA notes that Africa is still one of the three regions globally that have recorded positive year-to-date growth in 2015, with demand holding up despite underperformance from Nigeria and South Africa. However, the African industry is not growing enough in comparison with the potential for growth⁹.

³ IATA Economic Performance of the Aviation Industry, mid-year 2016. www.iata.org/economics

⁴ IATA: Press Release, 14 July 2016. www.iata.org/pressroom

⁵ AFRAA: Annual Report, 2015. www.afraa.org

⁶ ACSA: Consolidated Passenger Traffic, 2016. www.airports.co.za

⁷ AFRAA: Annual Report, 2015. www.afraa.org

⁸ IATA: Economic Performance of the Aviation Industry, Mid-year 2016. www.iata.org/economics

⁹ CNBC Africa: Why Africa’s airline industry is one of the few regions to record growth. 15 March 2016. www.cnbc.com/news/special-report/2016/03/15/airlines-iata-pekun-sowole/

2.2 Industry and Competitor Analysis

Aerotropolis education, training and skills development programmes are currently fragmented, both nationally and internationally, as most institutions only offer aerotropolis-related programmes as components of various technical and commercial degrees/diplomas, short courses, or technical training programmes, with no dedicated aerotropolis programmes currently identified during the Feasibility Study. For example, core technical aviation and engineering programmes are being offered through various institutions and universities within South Africa, while the same goes for the broader town and urban planning and built environment programmes. There is currently no integration of the various specialities that brings these skills from 'inside' and 'outside' of the airport fence together, to guide aerotropolis and airport city planning.

Optimal planning and implementation of an aerotropolis development requires a broad range of skills over and above just the core aviation and related industry skills. These include industries such as transport (intermodal) and logistics, supply chain management, urban and town planning, property development, sustainability planning, infrastructure development, place marketing, etc. Generally, these skills are categorised into commercial and management, technical and engineering, and built and natural environment and planning. Each of these skills categories are assessed below in light of the institutions that provide training and educational programmes, and those that might compete with the AIA once established.

2.2.1 Commercial and Management

Commercial and management includes skills such as aviation (airline and airport) management and operations, aviation business administration, supply chain and logistics management, economics, and law and regulations. These skills are offered in various formats including short courses, Diplomas, Certificates, Degrees, MBAs, Masters and PhDs.

From an aviation (airline and airport) management, operations and business administration perspective, these skills are offered extensively internationally, through IATA but also various universities such as Embry-Riddle, University of New South Wales, Concordia University, and Emirates Aviation University. Within South Africa, Status Aviation (through the DaVinci Institute) offers a BComm degree in Aviation Management while ATNS offer IATA diplomas on management and operations.

Supply chain and logistics management is offered in the form of Short courses, Diplomas, Degrees, Masters and MBAs extensively internationally, even with an aviation specialisation. Within South Africa, University of Johannesburg, Stellenbosch and UNISA all offer undergraduate and postgraduate degrees in supply chain, transport and logistics, most of which have modules on air transport. UKZN offers a degree in supply chain, but with no specific transport and logistics focus, while UEL offers supply chain short courses. Damelin, AAFSA and Flight Safety Training SA offer short courses.

Economics, with a specialisation in aviation and/or airlines, is offered as short courses, diplomas or Masters degree extensively throughout the globe through institutors such as Embry-Riddle, Concordia University, ACI, University of New South Wales, and IATA. In South Africa, UNISA, University of Johannesburg and University of Stellenbosch offer undergraduate modules in 'transport economics' and postgraduate in transport economics including 'air transport economics' and 'forecasting'. While Cranfield Aviation Training and ACI offer a short course on aviation economics.

Courses around law and regulation relating to aviation are offered broadly as short courses, diplomas and Masters degrees internationally through institutions such as IATA, Concordia University, Aviation Management College, Airport Strategy & Marketing, and Embry-Riddle. Nationally, International Trade Law is common, while University of Pretoria offers a Masters in Air, Space and Telecommunication Law, UNISA offers International Transport Law as a module in their law degree, and ATNS offers aviation law for Managers (through IATA).

2.2.2 Technical and Engineering

Technical and engineering includes skills such as aeronautical and aerospace engineering, aircraft maintenance engineering, electrical and mechanical engineering, computer science, safety and security, and various technical skills such as pilot training, aircraft mechanics and electricians, spray painters, avionic specialists, air traffic controllers and navigators, ramp and passenger handling, and ground control.

Aeronautical and aerospace engineering, electrical and mechanical engineering, and aircraft maintenance engineering are offered as Degree, Masters, and PhDs are offered extensively through institutions such as University of Glasgow, Delft University of Technology, Imperial

College of London, and Embry-Riddle. In South Africa, the University of Pretoria and Witwatersrand offer degrees and masters in Aeronautical Engineering, while general mechanical and electrical engineering programmes are offered at most Universities.

Computer science is extensively supplied internationally however with a limited aviation specialisation, with Embry-Riddle being the leading institution internationally. In South Africa computer science is offered extensively but with no aviation specialisation or focus on unmanned aircraft systems.

Safety and security is a vast field of specialisation in relation to the aviation industry and as such is offered extensively as Short courses, Diplomas, Degrees, and Masters internationally. Offerings are through institutions such as IATA, ICAO, ACI, Cranfield University, Embry-Riddle, Florida Institute of Technology, Emirates Aviation University. In South Africa safety and security short courses are offered extensively through ACSA Academy, Aviation City, Flight Safety Training SA, Denel Technical Academy, ATNS, AAFSA and Cranfield Aviation Training. ATNS, SACAA and Denel Technical Academy offer a short course on accident investigation, while AAFSA offers a course on screening and supply chain security.

In relation to technical training (aircraft and other technicians such as mechanics, electricians, avionics specialists, radiotriacs, spray painters, engine fitters, etc.), Short courses, Certificates, Apprenticeships are offered extensively internationally with several American universities offer a BSc in Aviation Technology, which allows you to become an aircraft maintenance technician. In South Africa, SAA Technical, MATA, Aviation City, and Denel Technical Academy offer apprenticeships/ trade certificates for most of the aviation-related technical trades.

Traffic management (including air traffic controlling and navigation, ramp handling, ground control, etc.) is offered as Short courses, Diploma, Degree, Masters, PhDs, and is extensively provided internationally with several American universities offering a BSc in Aviation Technology, which allows you to become a traffic controller. In South Africa, ATNS (through IATA) are main institution offering diplomas in air control, navigation and ground control.

Pilot licence training is offered extensively through the globe through various universities, airlines, and flight schools, with several American universities offering a BSc in Aviation

Technology, which allows you to become a pilot. Pilot training in South Africa is undertaken through SAA Cadet Programme or the various flight schools across the country such as Flight Training College in George, Johannesburg School of Flying, and SA Flight Training Academy.

With regard to cabin crew, training is offered extensively at an international and national level, with most flight schools providing basic training and airlines providing specific company training. In South Africa, cabin crew training is offered through Aviation City, Damelin, EPT, Cranfield, AAFSA, Flight safety training SA and others, as well as through the airlines.

2.2.3 Built and Natural Environment

Built and natural environment includes skills such as airport and town planning, strategic planning, wildlife science, environmental sustainability, green airports, noise and air quality science, and meteorology, astrology and astrophysics.

From an airport planning perspective, there is a limited supply of these skills internationally, with institutions such as IATA, ACI, Cranfield University, University of New South Wales, and British Columbia Institute of Technology providing short courses, diplomas and degrees in airport planning. There is nothing specific to Aerotropolis Planning internationally, and nothing related to airport planning in South Africa. Town, urban and regional planning is offered extensively throughout South Africa, however there is no airport-related focus.

Natural environment focuses such as wildlife science, environmental sustainability, green airports, and noise and air quality science are offered broadly internationally through IATA, Embry-Riddle and other specialist aviation institutions. In South Africa most universities offer environmental science and management, and some offer wildlife science, but with no aviation specialisation. In relation to meteorology astrology and astrophysics, degree, masters, PhDs are offered both nationally and internationally at most universities.

2.2.4 Aerotropolis and Aviation-Related Research

From a research perspective, most of the international and national universities identified above undertake dedicated research in their areas of expertise, such as in the aviation and related industries. For example, the National Aerospace Centre as part of the University of Witwatersrand undertakes on-going aeronautical engineering research. Internationally,

numerous private sector companies undertake research into areas such air service developments, safety and security, airport planning, tourism and economics, law and logistics.

In relation to aerotropolis development, limited research is occurring at an international and national level. Professor John Kasarda is the leading international expert, while masters and doctoral students at universities across the word continue to undertaken *ad hoc* research on aerotropolis-related topics.

2.3 SWOT Analysis

The table below presents a SWOT analysis for the AIA:

Strengths	Weaknesses
<ul style="list-style-type: none"> • Affiliated to UKZN and with numerous educational and research benefits. • Outsourced operations to UKZN allow for limited overheads and risks during the Incubation period. • Due to its position in KZN, the AIA has strong linkages with the Durban Aerotropolis - which will create substantial demand for skills. • Strong interest and already committed global and national partners. • Involvement of the leading global Aerotropolis expert, Prof Kasarda. • Strong correlation between aerotropolis and port and logistics skills. • Support from key aviation stakeholders like SAA, ACSA, SACAA, etc. 	<ul style="list-style-type: none"> • Current lack of aerotropolis-related skills and therefore limited lecturing and supervisory capacity. • Dependent on the demand for skills from the aviation and related industries, and development of the Durban Aerotropolis. • Global educational institutions are currently more established in the aviation and related industry space and will continue to attract students from South Africa and Africa. • No track record in the aviation training market.

Opportunities	Threats
<ul style="list-style-type: none"> • Current gap in the South African and African skills supply • Development of a niche educational and research product that will be demanded globally. • Current lack of aerotropolis research being undertaken both nationally and internationally. • Positioning of KZN as a centre of excellence through the generation of aviation and aerotropolis knowledge. • Stimulating the Durban Aerotropolis and the economy of KZN as a whole through optimal aerotropolis planning, improving the functioning of the aerotropolis, etc. • High youth population and therefore greater demand for higher education. • Global partnerships and collaborations. 	<ul style="list-style-type: none"> • Access to global and national funding for the AIA. • Volatile higher education sector and funding climate in South Africa currently. • Low levels of economic growth and rising youth unemployment is a threat to absorption of new skills.

2.4 Risk Assessment

The risks associated with establishing the AIA are identified in the table below along with potential mitigation strategies for each of the risks:

Risks	Mitigation Strategies
<ul style="list-style-type: none"> • There is currently a lack of local aerotropolis expertise, which limits the potential of the AIA in terms of sufficiently trained lecturers and research supervisory capacity. 	<ul style="list-style-type: none"> • Undertake a ‘train-the-trainer’ programme, which allows Masters and PhD students to be up skilled into research supervisors and lecturers (through partnerships with other universities such as Wits and the National Aerospace Centre). • Leverage off (and develop) partnerships with international institutions in order to access skilled researchers and guest lecturers for the AIA and allow local researchers to be part of international research projects (as part of the train-the-trainer).
<ul style="list-style-type: none"> • A lack of development of the Durban Aerotropolis and the aviation and related-industries will create a position of over-supply of skilled aerotropolis specialists. 	<ul style="list-style-type: none"> • Work with government and industry to attract and facilitate new investment into the Durban Aerotropolis through research that identifies real investment opportunities. • Partner with industry to ensure that the programmes and skills being developed are aligned to demand and take into account technological advancements in the industry.

Risks	Mitigation Strategies
<ul style="list-style-type: none"> Global aviation and related educational institutions (such as Embry-Riddle) are more established and will continue to attract students from across Africa. 	<ul style="list-style-type: none"> Partner with leading global institutions through opportunities such as joint degree offerings to ensure that African students chose KZN as their educational destination. Develop the AIA as a 'centre of excellence' in Aviation and aerotropolis education in Africa.
<ul style="list-style-type: none"> Ensuring access to global and national funding, in terms of grant and sponsorship funding. 	<ul style="list-style-type: none"> Leverage off the existing relationships that UKZN has with national and international funding partners (e.g.: through the UKZN Foundation) to identify grant funding opportunities. Engaging with local industry stakeholders to develop formal partnerships for sponsorship opportunities.
<ul style="list-style-type: none"> South Africa's higher education sector is currently volatile which places pressure on the AIA. 	<ul style="list-style-type: none"> Focus on research as a key output and offering of the AIA. Attract 'working' students from within the industry. Stimulate demand for AIA educational programmes from students across Africa.
<ul style="list-style-type: none"> Absorption of graduates into the industry is a challenge given current low national and provincial economic growth and high employment. 	<ul style="list-style-type: none"> Ensure that programmes and skills being developed are aligned to industry's scarce skills. Partner with industry to ensure that placements are offered to AIA graduates.

2.5 Key Findings of the Feasibility Study

A Feasibility Study was undertaken as Phase 1 of the AIA Establishment. The purpose of the Feasibility Study Report was to determine the economic and financial viability of various development scenarios for the proposed AIA, and to make recommendations with regards to the establishment of the AIA. The Feasibility Study Report formed the base off which the Business Plan was developed, and as such, the key findings of the Feasibility Study are incorporated into this report.

The Feasibility Study undertook a national skills supply audit which included a skills supply and benchmarking assessment, which provides a number of global (best case) and national case studies of education and training institutions such as IATA, Embry-Riddle Aeronautical University, Singapore Aviation Authority, South African Airways Technical, Denel, and the National Aerospace Centre at the University of Witwatersrand. The skills audit then undertook a scan of the educational offerings from global aviation and related institutions,

as well the offerings at a national level. This was done to identify the gaps that exist from a supply-side perspective, and reviewed skills that broadly fell into the commercial and management; technical and engineering; and built and natural environment. These are summarised in section 4.1 of the Business Plan. The analysis identifies that potential exists for the AIA to focus on both educational and research offerings in the commercial and management, and built and natural environment space, that contribute towards aerotropolis and airport city development in KwaZulu-Natal and South Africa.

A national skills demand analysis was then undertaken to review the TETA Sector Skills Plan and Scarce Skills List, and analyse the demand for skills within KwaZulu-Natal and South Africa based on outcomes of a stakeholder skills survey, consultations and targeted interviews of key stakeholders and training providers. The TETA Scarce Skills List identifies various technical skills that are in short-supply within South Africa, many of which relate core aviation occupations such as air traffic controllers, aeronautical engineers, mechanical and electrical engineers, all aircraft technician trades, pilots, and other airside services such as ground handling. As identified by the skills supply analysis, much of these are being provided for in South Africa by institutions such as SAA Technical, Denel Technical, MATA, ATNS, and ACSA, often via IATA. Other scarce skills that exist that currently aren't being developed nationally relate to skills such as airport managers, airport commercial managers, airport planning, etc. In addition, industry identified skills such as aeronautical (and other) engineers, air traffic controllers, airport city development, airport management, aviation management, network planning, aviation environmental management, and multi-model transport modelling as in high-demand.

A gap analysis was then undertaken which compared the skills on the TETA scarce skills list, skills listed by the industry as in high-demand, and the supply of skills in order to identify the key gaps that currently exist in relation to skills demand and supply. Based on these gaps, the potential focus areas of the AIA were identified, and thereafter 10 key niche focus areas. These potential and niche skills are identified in the Business Plan in Section 3.4. Further to this, the Feasibility Study unpacked the types of offerings that the AIA will provide. These are also identified in Section 3.4 of the Business Plan, and include short courses (including the master class), research, postgraduate programmes, and undergraduate programmes.

The Feasibility Study then unpacked the factors that will have an impact on the operational structures of the AIA. The UKZN Policy on Institutes, Centres and Units was assessed in order to gain a greater understanding of the requirements of UKZN for establishment of an institute. These are recapped in Section 3.4 of the Business Plan. Existing KZN institutions and units, (CAPRISA, SMRI, and UKZN Maritime Unit) were engaged during the Feasibility Study phase in order to identify the merits of both insourced and outsourced activities and to provide a benchmark against which the optimal structure for the AIA can be based. Three operational scenario models were then developed, namely: Incubation, Growth and Maturation. The recommendations in terms of the optimal operational model are presented in Section 2.3 and in more detail in Section 6.1. Thereafter, the educational and research offerings and human resources allocation per scenario were detailed, which formed the basis of the financial model assumptions. Partnerships with stakeholders were identified thereafter, and these too are incorporated into the Business Plan in Section 5.3, along with the opportunities that were identified during the AIA study tour undertaken.

Before presenting the financial and economic viability and recommendations of the Feasibility Study, the report undertook a SWOT and Risk Analysis. This is pulled through into the Business Plan Report in Section 4.2 and 4.3.

2.6 Overall Viability of the Aerotropolis Institute Africa

The overall financial and economic viability of the AIA was considered in light of the following factors: demand and supply for skills, industry demand and potential partnerships, contribution to development of the Durban Aerotropolis and growth of aviation and related industries, operational structuring, financial viability and the economic benefits that will be generated within KZN and South Africa.

The Feasibility Report highlighted that within South Africa (and Africa) there are limited offerings in terms of short courses and diploma/degree programmes that provide a base off which airport/aviation-related and aerotropolis skills can be developed (i.e. airport management, airport city planning, etc.). Short courses are available extensively at an international level while within South Africa short course offerings from entities such as IATA and ICAO are largely offered outside of KZN. In relation to diplomas/degrees, most stakeholders have indicated that these qualifications are largely received from international

universities such as Embry-Riddle. This includes both public official and industry specialists. In all cases, these offerings are largely aviation-focused and do not address the skills requirements that aerotropolis development generate in the broader field of airport city planning, which merges various areas of specialisation such as aviation management, law, economics, supply chain management, town and urban planning, and environmental planning (skills from inside and outside of the airport fence).

During the consultation process, industry, state-owned enterprises, universities and government all indicated the need for an institution that will offer a range of aviation and related industry educational offerings within South Africa, and bridge the skills gap through provision of university-level qualifications related to aviation and aerotropolis development that currently don't exist. From the skills demand and supply perspective, the AIA is expected to be widely supported and is deemed viable given the under-supply and excess-demand for the proposed offerings of the AIA. Not only have stakeholders indicated demand for a local aviation-related educational institution, but many have also indicated their intention to partner with the AIA in areas such as funding, partnering or contracting the AIA for research, contribution to training and other educational offerings (and enrolment of their employees), and provision of shared expertise and knowledge.

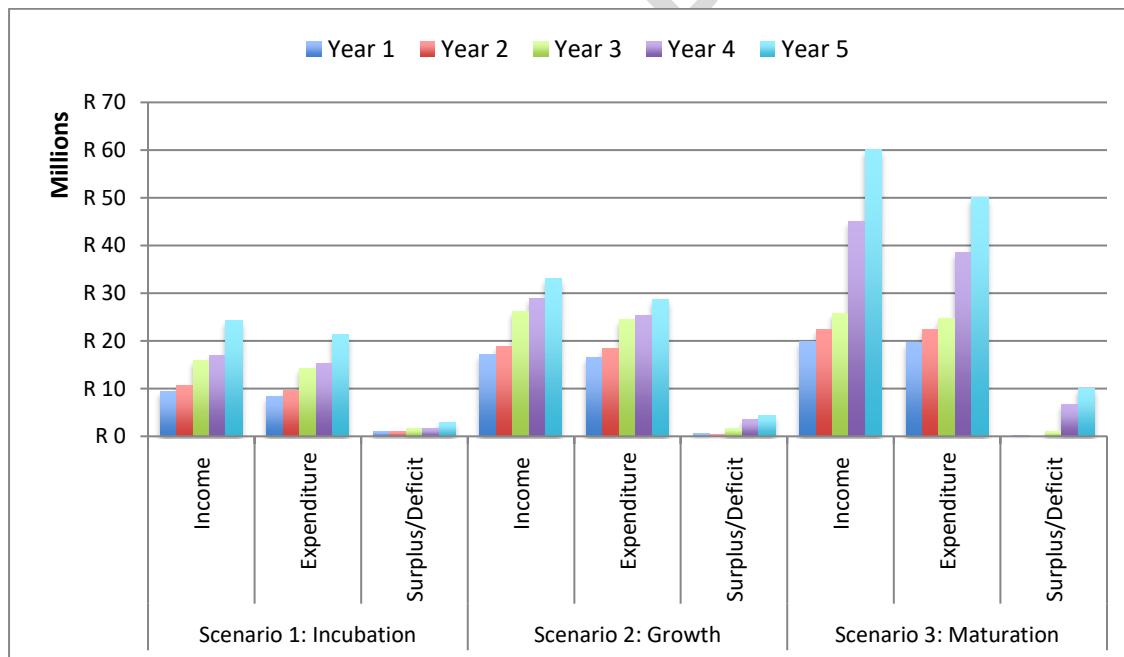
From a research perspective, limited research is currently being undertaken in relation to aerotropolis development within South Africa and Africa, with the majority of research being within the areas of aerospace engineering. As such, the AIA presents an opportunity for KZN and South Africa as a whole to position as a leader in the field of aerotropolis (and related aviation) research.

The development and provision of aviation and aerotropolis-related research and educational offerings provides a major opportunity for the province and country as a whole, as this research and the skills developed within the broad sector will have a significant contribution to the development of the Durban Aerotropolis, and growth of aviation and related industries in general. Accurate strategic planning guided by critical research and the development of relevantly skilled persons will ensure the optimal functioning of the Durban Aerotropolis and improve the attractiveness of KZN and the Durban Aerotropolis as an investment destination. This will guarantee that the economic benefits are enhanced within the provincial and national context, thereby increasing economic growth and employment

within sectors such as aviation; property development and construction; transport, logistics and supply chain management; tourism; manufacturing; and agriculture.

The potential operational structure of the AIA in itself can determine the overall viability of the Institute. The merits of both outsourced and insourced AIA operations was discussed during the Feasibility Study, and it was clear that the outsource model is optimal, at least during the establishment and early operational phases. All management, financial, administrative and payroll operations can be outsourced to the University, along with the short courses, research and postgraduate and undergraduate programmes. In addition, the AIA can leverage off existing UKZN partnerships, relationships and funding channels. As such, the risks that would usually be associated with establishing an Institute are mitigated and the AIA has the potential to become more viable in the short term.

Financial assumptions were developed after which a financial viability model was presented in order to determine the viability of each scenario from a financial perspective. The graph below provides a summary of the financial model for the three scenarios:



The change in income for each scenario is a result of greater research and educational offerings, as well as sponsorship and grant funding which is introduced in Scenarios 2 and 3. Expenses are directly related to the level of autonomy that the AIA seeks to achieve, with a greater number of staff required in Scenario 2 and 3. Operating surplus as percentage of total income ranges between 9% - 12% over the 5 year period in Scenario 1, which is

consistent in comparison with the Growth and Maturation Scenarios which are more volatile, ranging between 2% - 13% and 0,07% - 16,7% respectively. This is due to the fact that in the latter scenarios, a much larger staffing compliment is introduced in order to support the postgraduate and undergraduate qualifications, as well as larger research projects. In terms of overall financial viability, although Scenario 2 and 3 generate greater income (and greater operating surpluses in the latter years) than Scenario 1, the latter scenario provides a more consistent, financially risk-averse model for the AIA. Finally, the sources of funding were assessed which includes income from student fees, contracted research, sponsorship, and grant funding.

Based on the above assessment of the overall financial and economic viability of the AIA, a number of recommendations were presented in the Feasibility Study Report. These form the basis of the Business Plan, and are presented in the section below.

2.7 Recommendations towards the Business Plan

The Feasibility Study noted that the AIA is feasible when considering skills supply and demand, industry demand and partnerships, financial viability, and the contribution towards development of the Durban Aerotropolis and growth of aviation and related industries. When considering the optimal operational structure of the AIA, the lessons learnt by other UKZN affiliated institutes and the UKZN Policy on Institutes were considered. The UKZN Policy on Institutes notes that an Institute of UKZN is financially and legally independent, associated to the University through formal agreement, has its own board or governing body, may develop a contract with the University to provide management and/or financial services, and staff of the University may participate in the activities of the Institute while staff of the Institute may hold honorary positions in the University and may co-supervise research students.

When considering CAPRISA and the SMRI, both of these institutes were established under UKZN and over time developed into independent (but affiliated) institutes. Benefits of this phased approach include fully outsourced management, administrative, and financial services as well as adoption of existing UKZN policies in the establishment phase, which reduces the initial burden while the institute is generating research activity.

The scenarios presented for the AIA in the Feasibility Study included Incubation (fully outsourced), Growth (partial outsourcing) and Maturation (full independence). In order to move from a position of full dependence to full independence, there are ranges of considerations, which must be underpinned by financial and economic sustainability. These are the availability of resources (human, physical and monetary); the ability to generate operational funding; the economic demand for the various AIA offerings; willingness from industry and government stakeholders to partner with the AIA; flexibility of the University towards new institute 'methods' such as joint degrees or adjusting existing degree structures; industry skills demand requirements; response of the AIA towards innovation and changes in technology; and potential to access grant funding for research and demand from industry for commissioned AIA research.

Scenario 1 operates under the assumption that the AIA is totally dependent on the existing structures of the University, and that all operations of the AIA are outsourced to the University. Within this scenario, the AIA will operate under the structures of UKZN, utilising UKZN staff members, management, administration and financial support services. The AIA will require UKZN to carry out all management, administration and financial support services. Scenario 2 is a 'half-way' scenario between complete dependence on UKZN (Scenario 1) and complete independence (Scenario 3). In this scenario, the AIA will still operate under the existing structures of the University, however, the AIA will be more 'visible' than in Scenario 1 and start to develop its own identify in the market, rather than operating completely from within the University. The AIA will still be co-located within the University, have shared UKZN staff and financial support services, but start to develop its own staff compliment. Scenario 3 represents the point at which the AIA is almost completely independent of UKZN, albeit still affiliated to the university. The AIA would have its own premises and full complement of management and administration staff, but through its affiliation with UKZN, will still have some shared, seconded or contracted UKZN staff participating in the AIA operations. At this point, the AIA would be totally self-sustainable from a financial and economic point of view.

The feasibility study concluded that the AIA be established as per the operational structure presented by Scenario 1: Incubation, which allows the institute to grow under the auspices of the University, with all educational and research offerings outsourced to UKZN (and UEL), and most staffing (besides a shared General Manager and Administrator) outsourced to the

University. This will place the least financial strain on the Institute within the initial years and allow for core supporting functions to be undertaken by the University, therefore reducing the initial resource burden

The optimal (long-term) position of the AIA is a fully independent but UKZN-affiliated institute that can undertake and generate substantial research outputs and provide postgraduate and undergraduate qualifications and short courses, while the practical and viable establishment option is to be fully outsourced to UKZN.

As such, it was recommended that a ‘hybrid’ approach is adopted in terms of AIA establishment in which the AIA transitions from the Incubation towards Maturation. As such, these scenarios are merged to form a ‘hybrid’ based on the outcome of the financial feasibility of each, and developed into transitional stages for the AIA. This is presented in Section 6.1 of the Business Plan, and forms the basis off which the Business Plan is developed.

3 AIA Strategic Vision

3.1 AIA Strategy

For a number of years the African share of the global aviation industry has been hovering around 3% in spite of phenomenal growth from other developing markets like South America and Asia. This slow growth is attributable to a number of factors like lack of viable airlines, poor airport infrastructure and safety issues. The other major stumbling block that stands in the way of growth of the African aviation industry is scarcity of critical skills to meet the demands of this industry. Other broader skills requirements are those needed to integrate airport master planning and for cities in which those international airports are located, which is the aerotropolis master planning.

3.1.1 Strategic Choices

Whilst the skills needs are too huge for the AIA to make a meaningful contribution, the Institute will have to make some key strategic choices that will include the following:

- Contribute through **research and development** to the body of knowledge on aerotropolis and mainstream aviation industry.

- Collaborating and partnering with local, international and continental institutions to **deliver educational programmes** that will develop an aerotropolis human capital.
- Using a global panel of aviation and aerotropolis experts, develop **thought leadership** in collaboration with industry bodies like ACI, ICAO and IATA.
- **Advocate for policy shift** in support of air transport liberalisation initiatives like the **Yamoussoukro Declaration** and through the African Union and the economic blocks, viz., SADC, ECOWAS, ECCAS, EAC, and COMESA.

3.1.2 Strategic Roadmap

The AIA is too small an entity to make any meaningful change to the supply of scarce and critical skills in the African aerotropolis and aviation industries. However through its strategic choices the AIA will leverage the partnerships and collaborations that it will forge with various institutions, industry players and bodies. In implementing this Business Plan the AIA will be guided by the top 10 priority knowledge areas identified in the feasibility study. In developing the first educational programmes and research projects the AIA will be guided by the following:

Research:

- Prioritise research projects in aerotropolis and aviation areas for which there is very little or no body of knowledge. (These have been identified in the feasibility report.)
- Develop research proposals and identify research partners, which could include, industry players, bodies, other local and international HEIs, research institutions, etc.
- Solicit funding and execute the research projects.
- Publish research outcomes as academic journals and in other platforms like aviation seminars and conferences.

Educational Programmes:

- Develop education programmes on a collaborative basis rather than develop new ones from scratch.
- Explore joint degree programmes in the initial stages to give participants greater marketability of their skills in the global aviation market.
- Customise and align UKZN existing degree programmes to include aerotropolis and aviation modules that can be offered in collaboration with other international HEIs identified in the feasibility study.

The initial strategic approach for the AIA will be to cooperate with various educational and research institutions that have built a track record over the years. This will mitigate the AIA risks in the incubation and growth stages.

3.2 Vision and Mission

3.2.1 AIA Vision Statement

Potential vision elements:

- Development of skills within Africa to support growth and expansion of the Durban Aerotropolis and aerotropoli globally;
- Undertaking world-class aerotropolis and related-industry research;
- Provision of postgraduate and undergraduate qualifications within the aviation and related industry space;
- Become a 'centre of excellence' and hub for aerotropolis knowledge internationally.

Vision of the Aerotropolis Institute Africa:

The Aerotropolis Institute Africa will become a 'centre of excellence' and hub for aerotropolis knowledge in Africa and ensure development of skills within Africa to support growth and expansion of the Durban Aerotropolis and aerotropoli globally.

3.2.2 AIA Mission Statement

Mission Statement:

The AIA will provide quality aerotropolis and related aviation-industry educational qualifications and research to Africa and the world, and through its affiliation to UKZN and partnerships with educational and research institutions, aviation and related industries, and government, will become the leading aerotropolis skills and knowledge development institute on the continent.

3.3 Values

The Values of the Aerotropolis Institute Africa are:

- Supporting the National Development Plan, Provincial Growth and Development Strategy, and KZN Human Resource Development Strategy, which strive for the development skills and knowledge within the Province and nation as a whole;
- To nurture partnerships and collaborative relationships between aviation and related industry stakeholders to encourage the optimal growth and development of

the Durban Aerotropolis, South African aviation industry, and aerotropoli around the world;

- To provide quality education and research outputs in order to empower South Africans and Africans with future skills relating to the aviation industry and aerotropolis development;
- To assist in developing a sustainable aviation industry in Africa and support the aviation vision of the African Union Vision 2063 which “connecting all African capitals and commercial centres’ through...improved efficiency and connections of the African aviation sector and implement the Yamoussoukro Declaration”.

3.3.1 Aims and Objectives

The aim of establishing the AIA is to develop an enduring and financially sustainable knowledge centre that seeks to support the development of the Durban Aerotropolis and all other aerotropoli in South Africa and the rest of Africa. To this end the Institute will seek to, inter alia, provide thought leadership, knowledge support and pertinent applied research in the following areas:

- Planning and development of the aerotropolis;
- Innovative cutting edge technological advancement;
- Operational efficiencies;
- Policy advocacy for aviation and airport development;
- Global competitiveness of Durban Aerotropolis; etc.

AIA research outputs and lessons will be transferred to improve planning and development of future Aerotropoli in South Africa and Africa at large. The objectives of the AIA will be to achieve the following:

- Provide research support to the overall development of the Durban Aerotropolis.
- Provide thought leadership that will give KwaZulu-Natal a global competitive edge.
- Provide the skills sets required for the aerotropolis development in South Africa and in the rest of the continent.
- Build knowledge economy around the aerotropolis and related sectors.
- Set the agenda for the development of aerotropoli across Africa.
- Increase understanding of the airport city and aerotropolis concepts as vital components of airport, urban, and business site development.

- Demonstrate the applicability of the aerotropolis concept to improving the competitiveness of firms and increasing provincial trade in goods and services.
- Introduce methods, which produce measures of the economic and social benefits of airport city and aerotropolis developments to help secure political support and capital funding.
- Guide the development of Dube/Airport city and the greater Durban Aerotropolis so that they generate financial returns to investors while also fostering more economically efficient, attractive, and sustainable development.

3.4 Strategic Focus of the AIA

3.4.1 Institutional Considerations

The University of KwaZulu-Natal has a sub-policy that governs the “establishment of formal organisational structures to facilitate cooperative research, and to advance research endeavours in the interests of both the University and individual researchers”. This sub-policy provides guidelines with regards to the “establishment, conduct, review and termination of formal organisational structures established to further the conduct of collaborative research, both within and external to the University”. The sub-policy makes the following distinction between institutes, centres, units and research groups:

- **Research Unit:** Formal research entity set up to support the work of an individual research leader and his/her collaborators, which forms part of the School and College to which the research leader belongs. Research activities are supported from funds brought in by the research leader or collaborators, but a Unit is neither financially nor legally independent and its existence will be tied to the tenure of the research leader at the university.
- **Research Centre:** Formal research entity within the University structured to facilitate cooperative research amongst a number of researchers and responsible for generating its own research funding from external sources. A Centre is financially self-sufficient, but not legally independent, and it may be interdisciplinary (in which case its membership consists of a number of researchers representing several disciplines), or it may be located within a single school in order to facilitate cooperative research within the School or within a single discipline.
- **Research Institute:** Financially and legally independent body with its own Board of Control or equivalent governing body. An institute is a separate legal persona, associated with the University by formal agreement, which may include contracts for the University to provide management and financial services. Staff of the University

may participate in the activities of the Institute, and staff of the Institute may hold honorary positions in the University and may co-supervise research students.

The above three institutional options range from complete dependence on the University (Unit within a College or School) to complete independence (Institute affiliated to the University). Each of these structures were assessed during the feasibility study, and the following key factors were considered:

- Availability of resources (human, physical and monetary);
- Ability to generate operational funding;
- Economic demand for the various AIA offerings;
- Willingness from industry and government stakeholders to partner with the AIA;
- Flexibility of the University towards new institute 'methods' such as joint degrees or adjusting existing degree structures;
- Industry skills demand requirements;
- Response of the AIA towards innovation and changes in technology;
- Potential to access grant funding for research and demand from industry for commissioned AIA research.

The optimal structure of the AIA is a stand-alone entity, which allows the AIA to be independent from (but still affiliated to) UKZN and generate its own operational funding. As such, a **UKZN affiliated Institute** is the preferred institutional structure for the AIA. This allows the AIA to access benefits associated with being an Institute of UKZN such as outsourcing of staff, educational and research offerings; contracting the University to provide managerial, financial and administrative services; and benefiting from established systems, procedures and policies.

3.4.2 Core AIA Offerings

The core offerings of the AIA are identified in the table below, along with the numbers of each offering (attendees, students and projects) that the AIA will target during the first 5 years of operation:

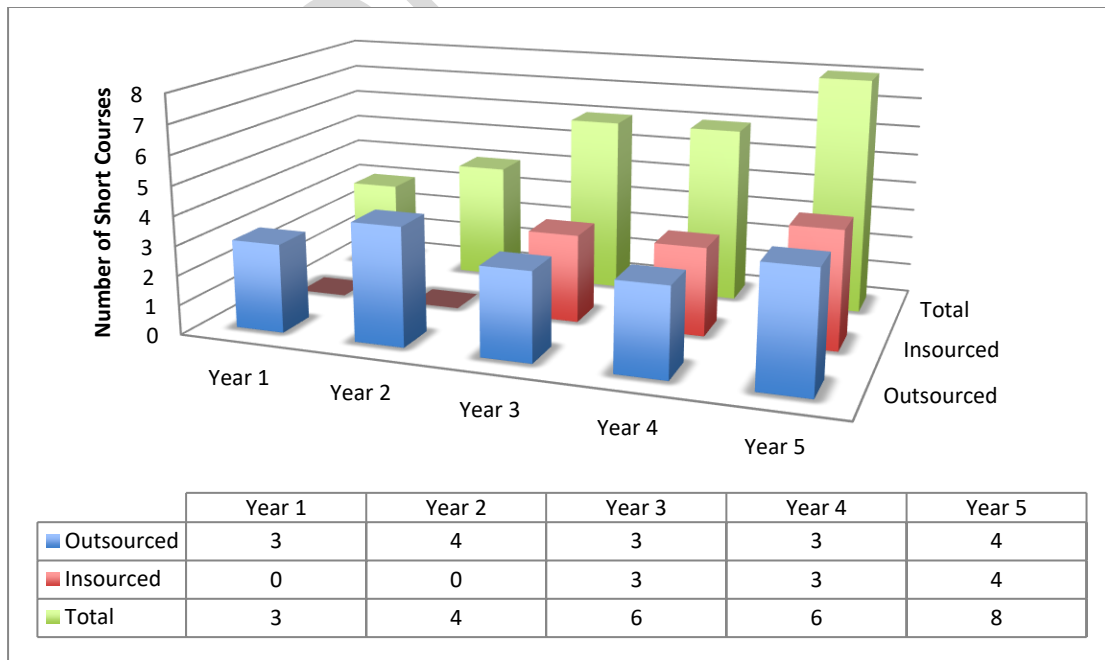
Offering	Description	Year				
		1	2	3	4	5
Short Courses	Provision of a variety of certified short courses on aerotropolis-related topics, outsourced to UEL and other service providers, and insourced.					
Research	Development of aerotropolis-related consulting and funded research on specific aerotropolis and					

Offering	Description	Year				
		1	2	3	4	5
	aviation-related topics, outsourced to UKZN and other research institutions, and insourced.					
Postgraduate qualifications	Development of aerotropolis-related postgraduate qualifications, both outsourced to UKZN and in partnership with other HEIs (e.g. joint degrees)					
Undergraduate qualifications	Development of aerotropolis-related undergraduate qualifications, both outsourced to UKZN and in partnership with other HEIs (e.g. joint degrees)					

Other offerings that the AIA will provide will be the hosting of seminars, conferences, guest lectures and talks on various aerotropolis and related industry topics, and facilitation of a community-driven outreach programme develop and nurture interest in aerotropoli. The core offerings of the AIA are unpacked in further detail below.

3.4.2.1 Short Courses

The first offering of the AIA will be in the form of certified short courses. The AIA will offer 3 to 5-day short courses, which will be targeted at middle to senior management of entities involved in aerotropolis and airport development and management. Each course will attended by at most 60 students. The breakdown of short courses on offer is displayed in the diagram below:



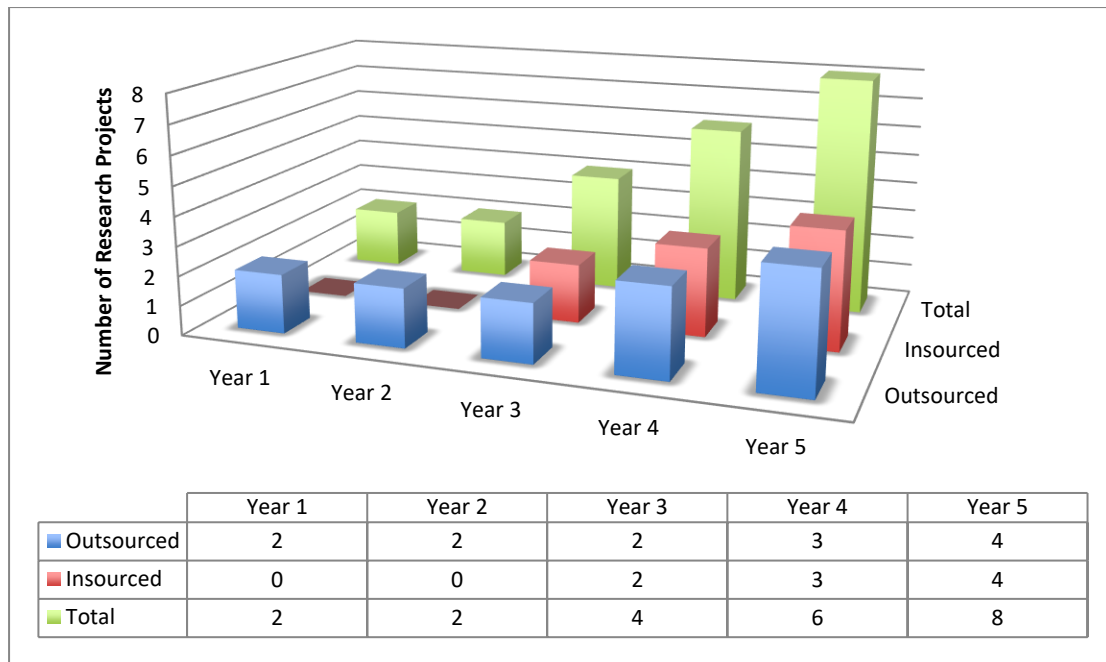
These courses will be offered in partnership with the UKZN Extended Learning (UEL) and other organisations that do similar programmes (outsourced), including international organisations such as IATA and ACI. These short courses can start to be offered internally (insourced) as the AIA matures and sufficient internal capacity has been developed. Initially in Year 1 and 2, the AIA will offer the following short courses, outsourced to UEL:

- **Aerotropolis Master Class:** The objectives of this course will be to give middle to senior managers working on developing aerotropolis, who will be drawn from international airports and cities/provinces in which those airports are located.
- **Air Services and Route Development:** This course will be targeted at airport managers and those from tourism agencies that are involved in route development to boost tourism and increase air services. The course will cover the fundamentals of route development and give the attendees skills on how to negotiate with international airlines.
- **Air Cargo Professional Development:** The objectives of this course will be to give attendees a broader understanding of air cargo supply chain, particularly the introduction of e-commerce as a disruptor to the industry.

As the AIA grows, additional short course topics will be identified through research to ensure that the AIA provides courses targeted at strategic focus areas in relation to aerotropolis development, particularly those that are not provided within South Africa and the continent. As the AIA grows, short courses will be designed in a manner that they can be used as credit for a degree or diploma programmes, such as the how certain IATA short courses can be done separately or collectively as part of a qualification.

3.4.2.2 *Research*

The AIA will be involved in developing a body of knowledge within the aerotropolis and other aviation topics. The AIA will offer opportunities to conduct both theoretical and applied research that contribute to the development and enhancement of knowledge and skills in relation to aerotropolis. Research will include both targeted funding research and consulting research (in the latter years when sufficient capacity has been developed internally).



The AIA will launch research projects in the key focus areas as identified on section 3.4.4 of this report. Research in these topics will be offered in partnership with relevant entities that are involved in the development of aerotropolis in South Africa and in the rest of the continent (outsourced). For instance, research in Route Development will be offered in conjunction with ACSA or SA Tourism as beneficiaries of the research outputs. As the AIA develops, certain research projects will be undertaken in-house by dedicated AIA staff (insourced).

3.4.2.3 Postgraduate and Undergraduate Qualifications

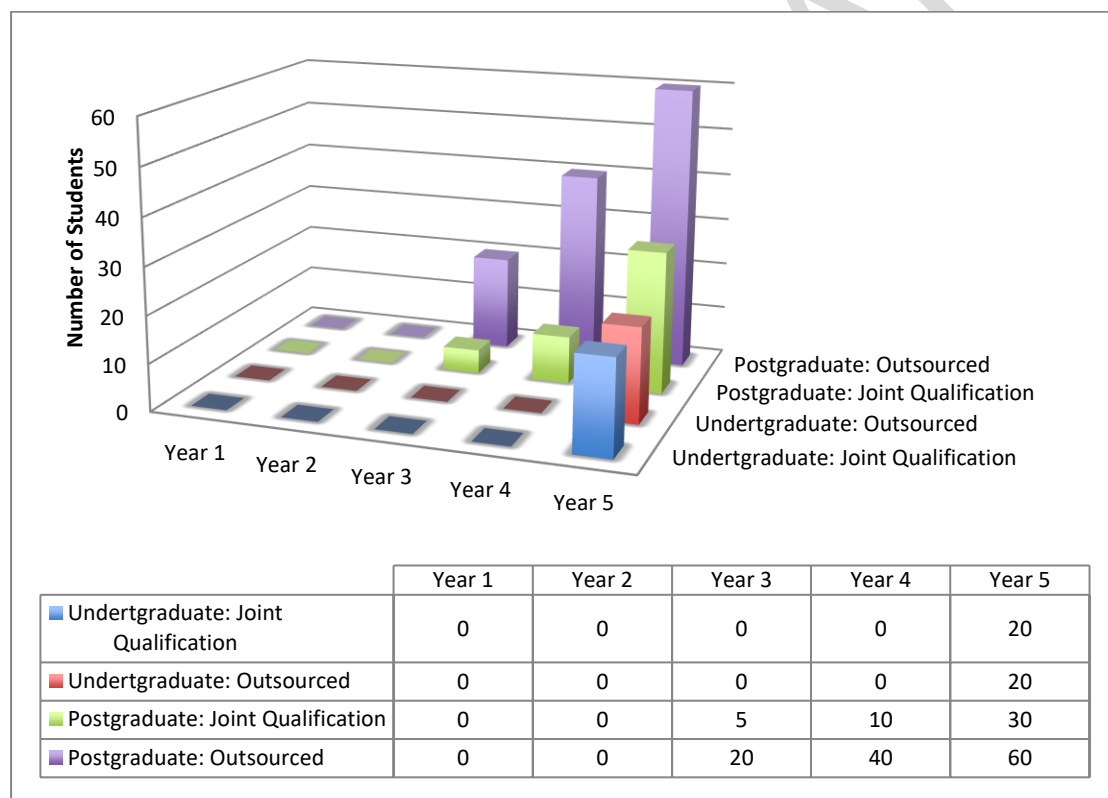
The AIA will provide both postgraduate and undergraduate qualifications. Postgraduate qualifications relate to masters degrees, postgraduate diplomas, MBAs/coursework masters, and doctorates (PhDs) while undergraduate qualifications comprise either degrees or diplomas. It is expected that the first postgraduate qualification will be ready to be offered in 2019 (Year 3). The first undergraduate qualification, which takes longer to develop and get accredited, would only be ready to be offered in 2021 (Year 5). However some aerotropolis modules would be introduced in some key UKZN bachelor degree programmes like B Comm.

The AIA will offer postgraduate and undergraduate qualifications through UKZN and in partnership with another universities either locally or internationally. As per the AIA Strategy, the AIA will deliver the postgraduate and undergraduate programmes through the following formats:

- Amended existing programme
- Joint degree programme

With regards to UKZN outsourced programmes, should the AIA decide to develop a dedicated Aerotropolis Development undergraduate degree programme, UKZN will need to develop a completely new programme. However, it is recommended that existing undergraduate programmes be adjusted to include some aerotropolis-related modules, which will allow for a major in Aerotropolis and/or Airport City Development.

The number of students that will be targeted by the AIA for each offering and year are identified in the table below:



In relation to postgraduate qualifications, a good base currently exists off which to build specific aviation and related industry skills from existing undergraduate degrees and diplomas (e.g.: Postgraduate qualifications in Aviation Economics from a Bachelor of Commerce - Economics or Airport City Planning from a Bachelor of Technology - Town and Regional Planning). Postgraduate programmes will be developed by and outsourced to UKZN. However, opportunities exist to partner with existing institutions that provide

postgraduate qualifications (such as Embry-Riddle), and provide these as a joint-degree with the partner institute.

Within South Africa, besides aeronautical engineering at Witwatersrand University and University of Pretoria, there are no broad aviation-related undergraduate qualifications currently on offer. Development of an undergraduate degree is an extensive process and as such the approach of the AIA will be to adjust existing undergraduate degrees and diplomas by introducing aerotropolis-related courses into these studies. This will prepare graduates to undertake a more aerotropolis-focused postgraduate qualification. After the AIA has reached maturation, and based on demand, an entirely new Aerotropolis (or related) undergraduate degree or diploma could be considered.

3.4.3 Potential Focus Areas

The potential focus areas for the AIA primarily relate to 8 broad areas, and comprise the following specific skills below:

- **Airport and Airline Management and Operations** (airport management, route and air traffic development; airport revenue management; safety management systems; air traffic control and navigation; accident investigation; crisis management; homeland security; risk management; cargo management and security; freight and passenger handling; human factors; airport digitisation; passenger experience; customs and immigration; LCCs and intra-Africa connectivity; code-sharing and alliances)
- **Airline Industry Economics** (aviation economics; air traffic forecasting and modelling; non-aeronautical revenue and commercial development; airline revenue management; network planning; aerotropolis economics; resource optimisation; research and development; airline financial and leasing; seaport-airport synergies)
- **Airport/Airport City Environmental Management** (environmental planning and sustainability; noise abatement; air quality; wildlife science)
- **Aviation Law and Regulations** (aviation policy and regulations; bilateral and air service negotiations and agreements; multilateral agreements – Yamoussoukro Declaration; licensing; international trade agreements; civil aviation authority; air transport regulatory environment; freedoms of air/open skies)

- **Airport City / Aerotropolis Master Planning** (smart airport planning; Special Economic Zones (SEZs), aerotropolis/airport city master planning and urban design; infrastructure planning; liveability and workability in airport cities; property development; urban design and clustering)
- **Transport, Logistics and Supply Chain Management and Planning** (Air cargo logistics; cargo management; freight clearing and forwarding; intermodal transport networks/ground connectivity; traffic modelling and management; green and non-motorised transportation)
- **Airport-linked Commercial Development and Marketing** (governance and leadership; project management; investment promotion, facilitation and retention; strategic planning; special economic zones (SEZs) and free trade zones; tourism development and marketing; enterprise development; destination marketing; advanced manufacturing; E-Commerce; branding; public diplomacy; communication)
- **Aeronautical Engineering and Technical** (Aeronautical engineering; aviation software engineering; airport infrastructure engineering; technicians; avionics; maintenance, repairs and overhauls; UAVs, load controlling)

In relation to technical skills such as technicians (electricians, spray painters, etc.), avionics, and maintenance, reports and overhauls (MRO), the AIA will not compete with existing organisations such as SAA Technical and Denel that are currently undertaking technical training programmes and apprenticeships, but rather seek to partner with and compliment these programmes. Much the same principle is applied when considering pilot and cabin crew training, which is widely provided by private flight schools and organisations such as SAA. As such, the AIA will not provide such technical training, but rather channel relevant requests for the abovementioned training to the relevant partner institution. In addition, the AIA will ensure that relationships are developed with TVETs to provide access to 'bridging courses' in order to up-skill graduates.

3.4.4 Niche Focus Areas for Research and Short Courses

Based on the list of potential focus areas for the AIA above, demand from aviation and related industries, and requirements from the perspective of aerotropolis development, the following are the top 10 research and short course niche focus areas within the short-term for the AIA.

1. **Route and Air Traffic Development;**
2. **Airport City, Aerotropolis and Airport Master Planning and Design;**
3. **Aviation Economics;**
4. **Air Cargo Logistics;**
5. **Airport Management;**
6. **Smart Airports and Airport Cities;**
7. **Airport Environmental Planning and Sustainability;**
8. **Aviation Policy and Regulations;**
9. **Airport Infrastructure Planning;**
10. **Seaport-Airport Synergies.**

4 Governance Structure

4.1 Non-Profit Company (NPC)

According to the Companies and Intellectual Properties Commission (CIPC)¹⁰, a Non-Profit Company (NPC) is “a company incorporated for public benefit or other object relating to one or more cultural or social activities, or communal or group interest”. An NPC can be incorporated with or without members and must have at least three directors. The incorporators of an NPC are its first directors and members (if it has members), and the NPC is recognised as a separate legal entity from its members. If an NPC has members, the members can be either voting or non-voting, while membership can be held by juristic persons including profit companies¹¹.

The constitution of an NPC is a Memorandum of Incorporation (MOI), which must set out the NPC’s objectives, of which at least one must be a non-profit objective. The MOI must be completed and signed by a minimum of three incorporators and three directors must be appointed. The income and property of the NPC may not be distributed to the incorporators, members, directors or officers of a non-profit company, except as reasonable compensation for services rendered by them, and all of a non-profit company’s assets and income must be used to advance its stated objectives, as set out in its MOI.

A Memorandum of Incorporation for the AIA will be developed and completed before the end of February 2017, as this is required for submission of the NPC registration process.

¹⁰ www.cipc.gov.za

¹¹ GAA Accounting: The Journal of the Global Accounting Alliance (www.gaaaccounting.com)

A NPC can apply for tax-exempt status from the South African Revenue Services (SARS), which is also known as Public Benefit Organisation (PBO) status, which allows the NPC to take advantage of tax benefits and reduce their tax burden. Incorporation as a non-profit company does not necessarily qualify an NPC for “any particular treatment in terms of the Income Tax Act 1962, or any other legislation, unless that legislation provides otherwise¹²”.

4.2 Establishment Process

4.2.1 UKZN Process¹³

The UKZN *Policy on Institutes, Centres, Units and Research Groups* provides some guidance in terms of the required UKZN Establishment processes. Although the Policy notes that no absolute rules can be laid down for the establishment of Institutes (as each individual case needs to be treated by their own merits), a number of possible scenarios are presented, of which the AIA falls in to the following:

- A motivation to establish such an Institute may come from some constituent part of the University.

The Policy states that negotiations relating to establishment of an Institute must be carried out through the University Research Office, and in considering the desirability of the institute, the following must be taken into account:

- Potential contribution to research and development;
- The compatibility of the goals of the proposed Institute with the University’s Vision and Mission;
- A research ethics policy for the Institute that is consistent with the University’s policy; and
- The desirability of separate legal status.

The Policy also notes in terms of legal structures, the Institute can be setup as a non-profit company (NPC) or if appropriate, a trust. In the case of the AIA, an NPC will be established.

UKZN’s *‘Guidelines for Decision Flow of Academic Matters’* as approved by Council on the 5 December 2011 provides some guidance in terms of the establishment process for an

¹² Norton Rose Fulbright: Financial Institutions Legal Snapshot (www.financialinstitutionslegalsnapshot.com)

¹³ Extracted from the UKZN Policy on Institutes, Centres, Units, and Research Groups (Research Policy IV). January 2014

Institute. The guideline states that in terms of establishment, disestablishment or reorganisation of Research Institutes and Centres, the DVC (Research Office) must first make a recommendation (in consultation with the Research Strategy Group) to the next relevant committee, which in this case is the College Academic Affairs Board (CAAB). Before submitting to the Senate, the CAAB must then make a recommendation to the Executive Management Committee (EMC). The EMC will then make recommendations to the Senate, who thereafter, will hand over final recommendations to Council for final decision in the matter of Institute establishment.

On the relationship between the University and Institute, the *Policy* stipulates that this relationship will be defined by contract, which will be for a given period (normally five years), and renewable subject to review, and that the contract should regulate the following (at least):

- Involvement of University staff and students in the Institute;
- Involvement of Institute staff in the University;
- Access by members of the Institute to the University's libraries, computer networks, and general facilities;
- Access by University staff and students to facilities of the Institute;
- The extent of the University's legal liability for the Institute's staff and activities;
- The extent of the Institute's legal liability for the University's staff and students working on Institute matters;
- Ownership of data and intellectual property;
- Definition of ethical standards;
- Provision of University services such as financial management, human resources facilities, and office space;
- The role of the University in the governance of the Institute and representation of the Institute on appropriate governing bodies of the University;
- Any provision of research funding by the University to the Institute;
- The recovery of overhead costs from the Institute to the University;
- Reporting requirements including statutory requirements from either the Institute or the University;
- The use of the University's logo and letterhead on Institute publications and stationery (The letterhead of the Institute normally shall explicitly include the name of the University, in the style "*Name of Institute, University of KwaZulu-Natal*" or in the style "*Name of Institute – A Research Institute affiliated to the University of KwaZulu-Natal*"); and

- The use of the University's name for the purpose of fundraising.

As noted above, the University will review its relationship with the Institute every five years, or at the end of any other period that may be specified in the contract or Memorandum of Agreement. The Institute will evaluate its own attitude to the relationship at the same time. In terms of the University's criteria for evaluation of the relationship for continuation, the following will be considered:

- The continued benefit to the University of the relationship;
- Confidence that the University is adding value to the work of the Institute;
- The nature of the research contribution over the period of review; and
- The continued compatibility of the goals of the existing or proposed Institute with the University's Vision and Mission.

The University review will be carried out by a committee recommended by the DVC (Research) in consultation with the University Research Strategy Group, which will appoint the majority of the members of the Review Panel. The Institute's review will be carried out according to its own procedures. If both parties agree, a joint review committee can be set up to review the mutual benefits of the association. The association will be renewed if both parties are agreed on its benefits.

4.2.2 Statutory Registrations

The name of the Institute has already been reserved as "Aerotropolis Institute Africa". The Institute will be registered as a "non-profit company" or "NPC" as defined in Section 1 of the Companies Act of 2008. This registration will commence in January 2017 and is expected to be completed by 01 April 2017.

The AIA will be registered as Public Benefit Organisation as defined in Section 30(1) of the Tax Administration Act 28 of 2011 and will be exempt from income tax. The AIA will be carrying out "public benefit activities" or "PBAs" as defined in the same Act. Once this registration has been completed the AIA will be empowered to issue Section 18A receipts for all donations received and used for approved PBAs, which include "education and development". The Section 18A receipts will entitle donors to a tax deduction for all donations made to the AIA.

Initially, the AIA will outsource all operational activities to the University, including management, financial, and administrative (including payroll) services. As such, the AIA is not currently required to undertake registrations such as PAYE and UIF, until such time that the Institute undertakes the administrative and financial services in-house.

4.3 Stakeholder Partnerships and Collaborations

Building strong relationships and partnerships with stakeholders is critical for the success of the AIA, in that the Institute will need to leverage off these relationships and partnerships in order to provide guided educational programmes and research, as well as other mutually-beneficial supporting activities. The key stakeholder groupings are presented in the next section below. During establishment, the AIA must ensure that these stakeholders are engaged (road shows to key stakeholders) and that Memorandum of Agreements are developed specifying the particulars of the relationships, and to leverage commitments in terms of letters of intent for sponsorship, grant funding and potential consulting research.

4.3.1 International Educational Institutions

The international educational institutions that have been identified as key partners to the AIA are:

- Embry-Riddle;
- Delft University of Technology;
- University of North Carolina;
- FedEx Institute of Technology at Memphis University;
- Indiana University Purdue University Indianapolis (IUPUI)

The overarching roles and responsibilities of these partners are:

- Offering of short courses, modules or full degrees through partnerships (joint degrees);
- Online learning;
- Research partners;
- Peer review of AIA curriculum and offerings;
- Source of guest lecturers/presenters.

Some potential collaboration opportunities have already been identified during the initial stakeholder consultations, and particularly during the recent Study Tour that was undertaken in September 2016. Some of the possible collaborations that have been

identified are presented below. These are currently exploratory and will be further pursued during the initial developmental stages of the AIA development.

- **Delft University of Technology (Netherlands)**
 - Potential to collaborate on ‘Sustainable, Competitive and Resilient Aerotropolis’ research (funded yet to be received);
 - Research collaboration in aerospace engineering and multimodal freight;
 - Better Airport Regions – Delft Project Leader could be invited to present at the 2017 Master Class.
- **University of North Carolina (USA)**
 - Research collaboration potential will be explored in the areas of ‘smart airport cities’. Three smart city research areas will be identified by both UNC and AIA, with one area being ‘smart transportation’.
- **FedEx Institute of Technology at Memphis University (USA)**
 - Research collaboration will be explored in the areas of ‘freight and logistics’ and ‘smart cities with a focus on transportation and mobility’.
- **Embry-Riddle Aeronautical University (USA)**
 - Partnership opportunities exist in terms of Embry-Riddles “3+1+1” programme
 - Offering of Embry-Riddle online courses through the AIA (which can be tailored to meet the AIA needs)
 - Collaboration potential in areas of African Aviation Industry and Aerotropolis development;
 - Collaboration in terms of development of ‘joint degree offering’ through the AIA
- **Indiana University - Purdue University Indianapolis (USA)**
 - Collaboration potential for research in areas of road safety and renewable energy

4.3.2 National Higher Education Institutions

Other national higher educational institutions that have been identified as key partners to the AIA are:

- Mangosuthu University of Technology (MUT)
- Durban University of Technology (DUT)
- University of Zululand (UniZulu)
- National Aerospace Centre (NAC) at the University of Witwatersrand (Wits)
- University of Pretoria (UP)
- University of Stellenbosch

The overarching roles and responsibilities of these partners are:

- Offering of modules or degrees through partnership (joint degrees);

- Research partners for specifically identified research topics;
- Decentralised locations for AIA online learning.

Given that the AIA is being established as an institute affiliated to UKZN, the roles and responsibilities of UKZN in the AIA are unpacked as part of this business plan (in terms of outsourcing of research, educational programmes, and operation and management of the AIA). UKZN will be responsible for the establishment of the AIA, and its operation during the Incubation and some parts of Growth stages.

4.3.3 Other National Training Institutions

Other national training institutions that have been identified as key partners to the AIA are:

- ACSA Academy;
- SAA Technical Academy;
- SAA Academy;
- ATNS Academy;
- Denel Technical Academy.

The overarching roles and responsibilities of these partners are as training partners in their particular fields of expertise. All of these institutions have established training academies, and focus largely on technical skills. ACSA Academy largely provides airport and airside training through IATA (and some internal training), while SAA Academy focuses on pilot and cabin crew training. SAA Technical and Denel both provide technical training apprenticeships (mechanics, electricians, spray painters, etc.) while ATNS provide air traffic controller training.

As identified in the feasibility study the AIA will not compete with the established and specialised technical training programmes offered by SAA, Denel and ATNS. The AIA will rather focus on developing partnerships with these institutions to enhance their training programmes and leverage off their specialist expertise.

4.3.4 International and National Aviation and Related Industry Associations and Organisations

International and national aviation and related industry associations and organisations that have been identified as key partners to the AIA are:

- IATA
- ICAO
- ACI
- ASM

- SACAA
- AFRAA
- AASA
- BARSA
- TIACA

The overarching roles and responsibilities of these partners are:

- Offering of certified short courses or diplomas in partnership;
- Industry communication and linkages;
- Research partners.

IATA, ICAO, ACI and ASM are the leading global aviation training institutions and together provide thousands of short courses and various diploma programmes. The AIA must develop partnerships with these institutions in order to provide courses that are in high demand. Potential exists for the AIA to become a certified training centre for IATA in KwaZulu-Natal, as training centres only currently exist in Johannesburg and Cape Town.

The AIA must ensure that a strong partnership is developed and maintained with the SA Civil Aviation Authority (SACAA) as the overarching aviation regulator in the Country. The AIA can draw from the wealth of knowledge that the SACAA has on the aviation industry, leverage potential research opportunities through the authority, and ensure that AIA training programmes and courses are aligned to industry demand by engaging closely with the SACAA.

The airline industry associations (AFRAA, AASA, BARCA, TIACA) are also critical partners and potential exists to undertake research on behalf of these associations, as well as leveraging off these associations large industry networks to promote the AIA and its offerings.

4.3.5 Industry Partners

Industry partners include airlines, airports, property developers, transport and logistics companies, ground handling companies, etc. The potential partners to the AIA that have been identified are:

- THD
- ACSA
- ATNS
- DTP
- SAA
- Mango
- Kulula
- FlySafair
- Swissport
- BidAir
- Menzies

The overarching roles and responsibilities of these partners are:

- Industry communication and linkages
- Skills absorption

Essentially, these partners will be important in terms of absorption of AIA graduates, as well as creating strong linkages between the AIA and industry. THD is the largest developer and land owner within the Durban Aerotropolis and as such are critical for the success of the AIA. THD can be a leading partner in driving research around Aerotropolis development, and should be considered as a key sponsor of the AIA.

Stakeholders like ACSA and ATNS are key role players and generate and absorb many of the 'inside-the-airport-fence' skills. As such, partnerships with these stakeholders are key, particularly in relation to the types of programmes and skills that the AIA generates. A strong relationship is also required with DTPC as land owners and developers of the Aerotropolis core, and absorbers of skills that will be generated by the AIA.

The airlines and ground and cargo handling companies are also essential in absorbing many of the 'inside-the-airport-fence' skills that are generated, and the AIA will maintain close relationships with these role players to ensure that courses and programmes being developed will be in line with industry demand. These companies also have a large global reach, and as such, expertise and experience will be leveraged through these relationships.

4.3.6 Public Sector

Public Sector (local, provincial and national government) that have been identified as key partners to the AIA are:

- | | |
|---------------------------------------|--------------------|
| • KZN EDTEA | • DHET |
| • NDoT | • DPE |
| • Provincial Departments of Transport | • TETA |
| | • Local government |

The overarching roles and responsibilities of these partners are:

- Industry oversight
- Skills monitoring
- Skills absorption

At a provincial level, the most critical stakeholder is the KZN EDTEA as the initiators and funders of the Aerotropolis Strategy, Aerotropolis Master Plan, and the AIA. EDTEA has committed establishment funding to the AIA for the first 2 years and as such, the department must continue to play an oversight role, and a departmental representative will be part of the Board of the AIA. The AIA will also be forging closer working relationships with other KZN Departments like Education, Transport, Office of the Premier, etc.

National government stakeholders essentially play an oversight role within the AIA and in ensuring that the AIA continues to develop skills in line with skills that are required by government, . In the case of the DHET, they will play a role in the oversight of the AIA as an educational institution, while TETA will continue to be a key partner in identification of critically scarce skills, and as a potential source of funding.

The involvement of local government (specifically eThekweni, Msunduzi, KwaDukuza, iLembe and uMgungundlovu) in the development of the Aerotropolis will become increasingly more important and as such, it is critical that local government are partners in the AIA. Local government officials, particularly within the town planning, environmental and economic development departments, units or clusters, will be the beneficiaries of the short courses (specifically the Aerotropolis Master Class) and educational programmes, absorbers of skills development through the AIA, and potential partners for aerotropolis research. The AIA will ensure that strong relationships are developed and maintained with all the relevant local government role-players.

5 Operational Plan

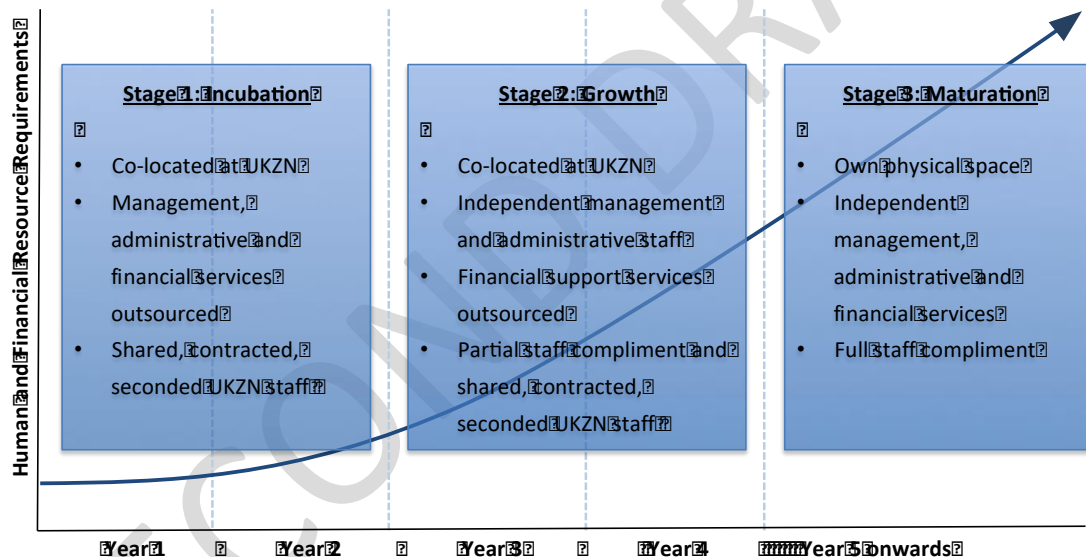
5.1 Stages of Development

The feasibility study undertaken as Phase 1 on the Aerotropolis Institute Africa Establishment identified three operational scenarios, namely, **Scenario 1: Incubation** (fully outsourced), **Scenario 2: Growth** (partial outsourcing) and **Scenario 3: Maturation** (full independence). The feasibility study concluded that “the AIA be established as per the operational structure presented by Scenario 1: Incubation, which allows the institute to grow under the auspices of the University, with all educational and research offerings outsourced to UKZN (and UEL), and the staffing outsourced to the University. The optimal (long-term) position of the AIA is a fully independent but UKZN-affiliated institute that can

undertake and generate substantial research outputs and provide postgraduate and undergraduate qualifications and short courses, while the practical and viable establishment option is to be fully outsourced to UKZN. **As such, it is recommended that a 'hybrid' approach be adopted in terms of AIA establishment in which the AIA transitions from the Incubation towards Maturation.**

These three scenarios are merged to form a 'hybrid' based on the outcome of the financial feasibility of each, and developed into transitional stages for the AIA. The AIA would transition into the second stage after year 2, when the postgraduate degree is developed and the institute can secure additional funding for research projects. In year 5, when the first postgraduate offering is provided and income is sufficient to support a full staffing complement and independent premises, the AIA can start to transition into the third stage.

The graph below displays the Stages of Development of the AIA:



The ability of the AIA to transition from an 'incubation' stage through to 'maturation' relies on the following factors:

- Availability of resources (human, physical and monetary);
- Ability to generate operational funding;
- Economic demand for the various AIA offerings;
- Willingness from industry and government stakeholders to partner with the AIA;
- Flexibility of the University towards new institute 'methods' such as joint degrees or adjusting existing degree structures;
- Industry skills demand requirements;
- Response of the AIA towards innovation and changes in technology;

- Potential to access grant funding for research and demand from industry for commissioned AIA research.

5.1.1 Stage 1: Incubation

In the incubation stage, the AIA will be fully dependent on the existing structures of the University, and its operations will be outsourced to the University. Within this phase, the AIA will operate under the structures of UKZN, utilising UKZN staff members, management, administration and financial support services. The UKZN will carry out all management, administration and financial support services. This will reduce the initial resource burden that would otherwise be evident in the later developmental stages, such as employing independent administrative, management and teaching/research staff members.

Under the UKZN Policy for Institutes, Centres and Units, provision is made for the Institute to contract UKZN to undertake these functions. The policy also makes provision for UKZN academic staff to participate in activities of the AIA and as such, and in this scenario UKZN staff be either shared, contracted and/or seconded to the AIA. The only staff within the AIA structure during the Incubation Stage will be the General Manager (GM), who will be a shared resource with UKZN (50% cost split) and an Administrative Officer. The GM will be responsible for all the activities required in order to establish the AIA, such as finalise registration of the AIA and appoint an interim board. Once a UKZN council decision has been made, and the AIA is formally an institute of UKZN, it can then move to a full board structure. It is envisaged that the AIA will have both a management board and an advisory board. The GM will also be responsible to develop content for short courses and graduate programmes, develop and nurture partnerships with key stakeholders, develop funding proposals, raise funds for contracted research and the daily management duties of the AIA. These tasks would eventually become the responsibility of various full time staff such as Director, Research Chair and Short Course Coordinator (see middle and Maturation Scenarios).

The administrative officer will provide operational support to the GM while undertaking the day-to-day administrative support to the AIA. All other HR, payroll and financial activities will be fully outsourced to UKZN, with some record keeping being done by the administrative officer. In terms of research capacity, a research chair and post-doctoral research fellows will be outsourced to UKZN and other universities across the country (housed within their

relevant schools or colleges) in order to undertake funded/consulting research, while research capacity is generated (training of masters and doctoral students). Postdoctoral fellows will also assist in lecturing when the postgraduate programme is initiated. At the same time, the AIA will encourage Masters and PhD students housed within the various UKZN schools and colleges to undertake research (as part of their theses) on AIA related topics, as well as pull in research capacity from students as and when funded/consulting research projects are awarded.

In this stage, the AIA will immediately offer short courses (as educational offerings), and target funded/consulting research as the main research offering. Short-courses (including the Aerotropolis Master Class) will be fully outsourced to the UKZN Extended Learning (UEL), and any other institutions, universities and private organisations that the AIA might identify. The AIA will be responsible for development and design of course content, while the outsourced entities will be responsible for the actual delivery of the courses and certification.

With regards to research, the AIA will develop key focus areas for research in consultation with stakeholders. The AIA will then generate research proposals that can be taken to various research institutions and partners in order to leverage funding for this research. The AIA will utilise funding channels through the UKZN Foundation (such as USAID, World Bank, etc.) as well as target partners such as NDST, KZN EDTEA, ACSA, and CSIR. MoU's will be developed with UKZN and other institutions to determine the agreements with regards to outsourcing the research. For more detail on the research approach of the AIA, see section 5.4.

The development of a postgraduate programme will commence in year 1, with the aim of developing course content, completing all South African Qualifications Authority (SAQA) accreditation processes, staff recruitment, and marketing, for the course to be offered in year 3. This stage operates logically as an initial phase for establishment of the AIA, and relates to a suggested short-term timeframe for year 1 – 3. This would allow the AIA sufficient time to tailor short course offerings through structured and formal partnership agreements, encourage and facilitate contracted research into Aerotropoli, test the financial sustainability of the initial AIA offerings and operational structure, and ensure sufficient economic market demand is generated for the Institute. This approach ensures that the AIA

can leverage existing resources, facilities and infrastructure, and can organically grow its footprint towards an expanded, medium-term solution through a sustainable and market driven approach.

5.1.2 Stage 2: Growth

Stage 2 is a 'half-way' point between complete dependence on UKZN (Incubation) and complete autonomy (Maturation). In this stage, the AIA will still operate under the existing structures of the University, however, the AIA will be more 'visible' than in stage 1 and start to develop its own identity in the market, rather than being an institute under the University. The AIA will still be located within the University, have shared UKZN staff and financial support services, but start to develop its own staff compliment including management (an AIA CEO), administrative staff, and academic staff, lecturers and researchers (including a research chair). In addition to the offerings as presented in Stage 1 (short courses, contracted research and a postgraduate offering), the AIA will offer additional short courses through UEL and other institutions as well as insourced short courses (offered by the AIA expect for certification), increase the number of postgraduate students, provide a postgraduate offering in partnership with other universities (joint degree offering), further develop its educational offerings to include an undergraduate degree in year 5, and expand its contracted research offerings.

During the growth stage, the Institute will have a combination of full-time AIA staff, and shared, contracted or seconded UKZN staff. In order to provide such a significant educational and research offering, the AIA will require the services of a full-time CEO. The key roles of the CEO will be the to be to implement the vision of the AIA to become a fully-fledged and independent (though still affiliated to UKZN) research and educational institution by the end of Year 5. Unlike the Incubation stage, the Growth stage requires a dedicated Short Course Coordinator to develop and coordinate the short courses, as in year 3 the AIA will provide insourced short course offerings in addition to the continued outsourced courses. In terms of administrative support, a Personal Assistant will be employed to provide support the CEO, while a Senior Administrative Officer will be employed to undertake all the administrative activities of the AIA. A dedicated Chief Financial Officer will also be employed to manage the AIA finances whilst still outsourcing to UKZN some mundane functions like bookkeeping and payroll services.

From a research perspective, a dedicated Research Chair will be appointed in the Growth Stage, along with up to 5 Postdoctoral Fellows. The Research Chair will operate as an Associate/full Professor and will be funded by the UKZN Foundation while postdoctoral fellows will be funded through UKZN or external funding sources. The Research Chair will be responsible for development of research proposals; sourcing research funding, facilitating and coordinating contracted research, the supervision of this research (oversight of the research by Masters, Doctoral and Postdoctoral researchers), and development of supervisory capacity. Postdoctoral fellows can be seated within the various schools or colleges of UKZN or other universities around the country, but assist in undertaking aerotropolis-related research under the AIA as well as training of Masters and Doctoral students. Fellows can also be utilised to lecture when the postgraduate and undergraduate programmes commence.

This stage assumes that the AIA will have a fairly strong foothold in the market place and will be financially and economically sustainable. It would therefore be advised that this stage only be targeted as a 'medium-term' approach (from year 3 or 4 onwards) which is founded off the organic growth of the AIA from the position identified in stage 1, where the Institute itself has become established though initially leveraging existing resources, facilities and infrastructure and expanded its footprint and market demand. This assumes that the offerings in stage 1 will have been recognised and supported by industry and government stakeholders (and AIA graduates), both nationally and internationally, and that the additional offerings of postgraduate and undergraduate studies has been identified as required.

5.1.3 Stage 3: Maturation

The final stage represents the point at which the AIA is almost completely independent of UKZN, albeit still affiliated to the university. The AIA would have its own premises and full complement of management and administration staff, but through its affiliation with UKZN, can have some shared, seconded or contracted UKZN staff participating in the AIA operations. As with the Growth Stage the AIA will have a dedicated CEO, Short Course Coordinator, Financial Officer, Research Chair and Postdoctoral Fellows (although some additional fellows will be incorporated). Senior Personal Assistant to the CEO will be employed along with a Senior Administrative Officer. A dedicated Financial Manager will be employed to oversee the activities of the Chief Financial Officer and also undertake the

accounting and other financial management activities of the AIA, while a dedicated HR Manager will be employed to manage recruitment processes, staff facilitation, and payroll previously outsourced to UKZN.

Within this Stage, all the offerings from the previous scenarios will be provided (short courses both outsourced and insourced, postgraduate and undergraduate studies, and funded/consulting research), however the offerings would be expanded to include additional undergraduate offerings, and up-scaled contracted research. In terms of short courses, the AIA will offer additional short courses through outsourced partnerships with UEL and other institutions, universities and private organisations, while ramping up the insourced short course offerings significantly in year 3. Postgraduate offerings through UKZN will remain the same as in the Growth Stage, however postgraduate degree offerings through partnerships with other universities in the form of Joint Degree offerings will be expanded. The key addition in the Maturation stage is that 2 undergraduate offerings will be provided, comprising of a commerce/management qualification and technical/engineering qualification, both partially through UKZN and in partnership with other universities (joint degree).

Within the technical/engineering qualifications, the AIA will at this stage consider development of a skills development facilitation or bridging/up-skilling function. The AIA will facilitate the up-skilling of Technical and Vocational Education and Training (TVET) graduates into certified University qualifications, whether through University's Engineering Schools, Universities of Technology or formalised partner training programmes (ATNS air traffic controller diplomas or SAA Technical Artisan Training Programmes).

Within the maturation stage, the AIA would be a completely independent Institute (but affiliated to UKZN), much like how CAPRISA is currently. This would require the AIA to have:

- An established research base developed,
- Significant demand from the market to warrant adjusting or manipulating existing undergraduate degrees and to establish research consulting services, and
- Be financially sustainable to ensure that all the management, administrative, financial and academic activities and employee expenses can be supported.

This stage is considered as 'long-term' (from year 4-5 onwards), which is justified from a financial and economic sustainability perspective. This requires strong support and partnerships with industry and government stakeholders, and substantial demand for offerings such as consulting and undergraduate studies. In addition, this stage relies on willingness of UKZN to adjust existing undergraduate degrees and development of new course modules around aerotropolis development.

5.2 Outsourcing and Shared Services

In the incubation stage, all other administrative (including payroll), management and financial services will be outsourced to UKZN. In the third and fourth years of operation, the financial management and payroll functions will remain as outsourced service of UKZN. From the fifth year onwards, the AIA will take over all these functions and as such will no longer outsource any to UKZN. Some staff members will still be shared, contracted, or seconded from UKZN after maturation is reached, while most educational offerings (postgraduate, undergraduate qualifications and research) will still be outsourced to UKZN.

Short courses will be outsourced to UEL and other organisations that provide similar programmes for as long as is required. Research will be outsourced to various school and colleges within UKZN as well as other universities or organisation that undertake research of a similar nature. Postgraduate and undergraduate qualifications will also be outsourced to UKZN, as well as to other universities both nationally and internationally that will form partnerships with the AIA for joint degree offerings. From the third year onwards some short courses, research and postgraduate (and undergraduate in the fifth year) offerings will start to be undertaken in-house by the AIA as sufficient internal capacity is developed, and as such, the level of outsourcing to UKZN and other organisations, institutions and universities will gradually decline.

As such, MOUs will be required between the AIA and UKZN, UEL, other universities, research institutes, and/or any other stakeholders that the AIA might partner with for research or educational offerings. The AIA will however only sign Memorandum of Agreements (MOUs) with UKZN and UKZN Extended Learning (UEL) during the establishment phase, as most activities will be outsourced or shared with UKZN and UEL including management and operations (including staffing), educational (short courses, postgraduate and undergraduate) programmes and research offerings.

A MOU will be signed between AIA and UKZN (for all school and colleges) in order to address all the particulars relating to the outsourcing of management, administrative and financial services; sharing/seconding of UKZN staff to the AIA; the operation of research projects and postgraduate and undergraduate programmes; and all aspects relating to the sharing profits. Another MOU will be signed with UEL to address the offering of short courses and the profit sharing. Additional MOUs will be required as and when new research partnerships, short course provider's offerings, and joint degree programmes are established.

UKZN's *Policy on Self-Funded Teaching Programmes* notes a number of areas that the UEL will take responsibility for in offering of self-funded short courses, which are displayed below¹⁴. The following must be considered in the MOU between AIA and UEL:

- a) ensuring that business plans, budgets and funding are provided for all Short Courses;
- b) the management, administration, logistics and delivery of all Short Courses approved from respective colleges or departments;
- c) maintaining and updating a University-wide database to fulfil the academic record-keeping and certification requirements in respect of all approved Short Courses - with all student registration details, delivery modes, enrolments, pass rates, completion rates, credit accumulation, certification, facilitator records, etc.; ensure the data base is accessible to designated University members; and ensure backup of this database in conjunction with ICT;
- d) marketing, advertising and promotion of Short Courses offered. (Where the UKZN logo is used, the artwork must be approved by the Executive Director: Corporate Relations);
- e) the printing of course and other material;
- f) the management and administration of budgets; the collection of fees, payment of all running expenses and the provision of a payroll function;
- g) generation of quarterly and annual financial reports, as applicable and as required by the UEL Board;
- h) the organisation and administration of course graduation, where applicable, in conjunction with the offices of the University Registrar and the Division of Corporate Relations;
- i) other duties incidental to the administration, management and delivery of Short Courses.

¹⁴ UKZN Policy on Self-Funded Teaching Programmes, December 2009

5.3 Course Development

5.3.1 Development and Accreditation Process

Postgraduate and undergraduate programme development and accreditation is guided by the policy of The South African Qualifications Authority (SAQA), namely, the *'Policy and Criteria for the Registration of Qualifications and Part Qualifications on the National Qualifications Framework'*, as well as the Council of Higher Education (CHE) Higher Education Quality Committee (HEQC) *'Criteria for Programme Accreditation'*.

According to SAQA¹⁵, the “National Qualifications Framework (NQF) is the principal instrument through which national education and training qualifications are recognised and quality-assured”. The NQF came into effect on 1 June 2009 and is a “comprehensive system for the classification, registration, publication and articulation of quality-assured national qualifications and part qualifications”. As per the Policy, the following must be considered in development and accreditation of the postgraduate and undergraduate programmes:

- a) SAQA will register a qualification on the recommendation of a Quality Council provided that the criteria for registration on the NQF are fulfilled (the criteria are listed in the Annexure);
- b) Qualifications and part qualifications for registration on the NQF must:
 - a. Include clear specifications of outcomes, using the level descriptors
 - b. State the minimum requirements to obtain the qualification
 - c. Identify the relevant Sub-framework on which it is recommended for registration on the NQF.
- c) Part qualifications registered on the NQF should indicate the registered qualification(s) of which they are part, or will form part.
- d) Qualifications and part qualifications submitted to SAQA for registration, but which do not meet the registration criteria, will be returned to the relevant Quality Council for amendment.
- e) The SAQA Board is the final authority that registers qualifications and part qualifications on the NQF.

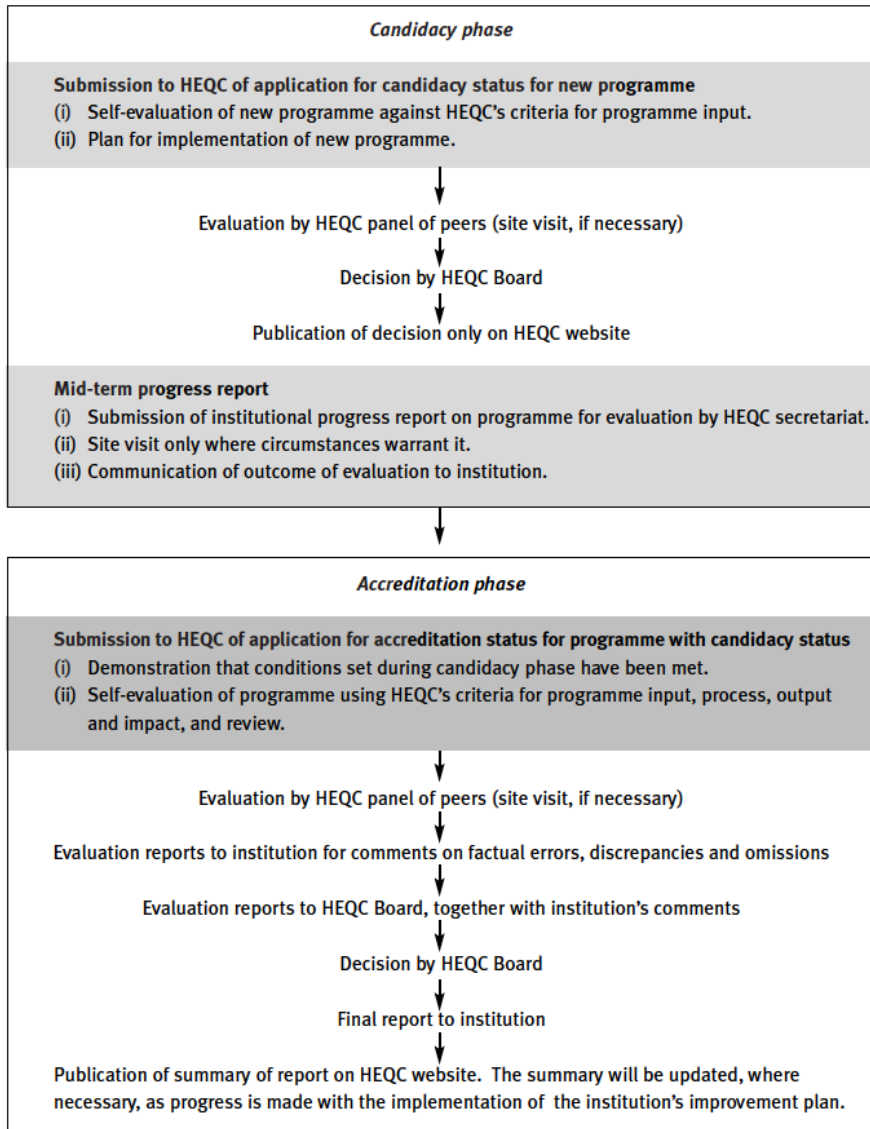
¹⁵ SAQA Policy and Criteria for the Registration of Qualifications and Part Qualifications on the National Qualifications Framework, March 2013

- f) Quality Councils will advise SAQA, in writing, of qualifications and part qualifications that will no longer be offered. These qualifications, even though no longer offered, still form part of the NQF.
- g) All qualifications and part qualifications registered on the NQF will be on the SAQA website.
- h) Foreign qualifications being offered by providers in South Africa must meet these criteria for registration on the South African NQF.

The criteria the accreditation of programmes developed by the CHE's Higher Education Quality Committee (HEQC) were designed to be used by higher education institutions in applications for accreditation of new programmes (or re-accreditation of existing programmes) and as a guideline for follow-up activities after the HEQC decisions on accreditation or re-accreditation of programmes. The guidelines are also meant to be used as the basis of an Institution's own self-evaluation processes, along with any internal benchmarks that the institution sets themselves. As noted in the guideline document, the "The HEQC will use the criteria, the self-evaluation report and supporting evidence provided by the institution, in the evaluation of applications for programme accreditation (new programmes) or reaccreditation (existing programmes)". The guidelines also specify that programmes need to comply with other national requirements, of which the following are of importance to the AIA:

- a) The programme must be part of the institution's programme and qualification mix (PQM), as approved by the DoE;
- b) The programme has to meet the national requirements pertaining to programmes which are at present being developed within the context of the NQF (as discussed above);
- c) The programme should be registered by SAQA on the NQF;
- d) The stipulations of the Labour Relations Act and conditions of service with regard to recruitment and employment of staff;
- e) Relevant labour legislation and regulations on health and safety in the workplace.

The HEQC presents 19 criteria, which needs to be followed in towards programme accreditation. The AIA must ensure that the detail and requirements of these criteria are adhered to during the course development and accreditation process. The image below presents the process that needs to be followed by the AIA and UKZN in establishing and accrediting new programmes:



Internally, UKZN programmes follow the processes as identified in UKZN's 'Guidelines for Decision Flow of Academic Matters', which were approved by Council on 05 December 2011.

The basic principles, which guide academic decisions, are as follows:

- All matters which significantly change the structure of the University serve before Council for approval (which includes the establishment of Institutes);
- College Academic Affairs Boards (CAAB) and Senate must be consulted on all policies affecting academic staff and students;
- Curriculum decisions for undergrad, honours and PGDip students are made in the School to which the student belongs. Such affiliation is determined based on the home school for the qualification the student is registered for, or their designated primary major in the case of the genera degrees. Such decisions will generally be made by the relevant Academic Leader: School Teaching & Learning.

In relation to approval of a **new qualification or programme that needs accreditation** (new qualification type, designator or qualifier or where there is >50% change) the first step is for the School Board to make a recommendation to the next relevant committee, which is the College Academic Affairs Board (CAAB). The CAAB will then make a recommendation to the College Management Committee if the budget is within the college budget. Otherwise, should the budget fall outside of the college budget, the CAAB will need to make a recommendation to the Executive Management Committee (EMC). The will thereafter make final recommendations to the Senate, who holds the authority to make final decision on the matter. Senate will then pass on the information about the decision to Council for noting.

In the case of a new **major, stream or specification in an existing approved programme or qualification** (same qualification, designator and qualifier), the process remains the same up in terms of the School Board making a recommendation to the CAAB. In this case however, the CAAB has the authority to make a final decision on the matter. Support is still required from the EMC. The final recommendation is then passed along to Senate for noting.

Short course development is guided by UKZN's '*Policy on Self-Funded Teaching Programmes*'. Short Courses are Self-Funded Teaching Programmes (SFTPs) that are "managed through UEL but that do not generate subsidy, and are not on the University Programme and Qualification Mix (PQM)¹⁶". The Policy states that SFTPs must be formally approved through UKZNs established processes. Authority for the approval and establishment of SFTPs rest with the relevant College Academic Affairs Board (CAAB), whom will consider various factors before approving any SFTP. These considerations are whether the SFTP creates any separation of the University's teachings into 'mainstream' and 'non-mainstream' categories, if the SFTP compromises the quality and viability of existing operations, and whether or not the SFTP competes with existing academic programmes within the various schools or colleges.

In terms of approvals, self-funded and formal accredited teaching programmes are approved by the full school board, full college management board for financial viability and the full CAAB, and noted by Senate. Short courses are recommended by the relevant school board (dean), and approved by the College Academic Board (DVC) in consultation with UEL.

¹⁶ UKZN Policy on Self-Funded Teaching Programmes, December 2009

5.3.2 Collaborative Programmes/Degrees

The AIA will provide both postgraduate and undergraduate qualifications as collaborative (joint or co-badged degrees) programmes through partnerships with national or internationally universities. One such example is the Embry-Riddle Aeronautical University's '3+1+1 programme', which allows a graduate with a 3-year degree from another university (i.e.: Bachelor of Commerce from UKZN) to further their qualification at Embry-Riddle at the Honours and Masters level in an aviation-related speciality.

The definitions of joint and co-badged degrees are¹⁷:

Joint Degrees: awarded at the successful completion of a jointly offered single study programme offered collaboratively by two (or more) HEIs. The programme will:

- involve time spent by the student at both (or all) institutions; and
- feature a jointly-developed and integrated curriculum; or
- a single research topic resulting in a single dissertation (master's degrees) or a single thesis (PhDs).

Upon completion of the programme, the student is awarded a single degree certificate issued and signed jointly by all HEIs involved in the programme and two (or more) national certificates issued by each collaborating institution attesting to the award of the qualification (with the provision that each certificate must refer to the joint nature of the qualification and specify that the qualification is being conferred in conjunction with another institution).

Co-Badged Degrees: awarded at the successful completion of one HEI's degree programme to which one or more partner institutions (usually an HEI or more than one HEI) have contributed parts. The degree-awarding and enrolling institution takes responsibility for the curriculum, and the contribution of the other institution(s) is limited to:

- providing a course or courses which the degree-awarding institution recognises towards the degree; and/or
- providing co-supervision (in the case of a research student) in terms of a collaboration agreement.

Upon completion of the study programme, the successful student is awarded a single degree and a single degree certificate issued by and signed by the degree awarding and enrolling

¹⁷ UCT Policy on Co-Badged Qualifications and Joint or Jointly Awarded Qualifications, 15 March 2015

HEI, but bearing the badge(s) of the other institutions in recognition of their contribution under a formal collaboration agreement.

The Department of Higher Education (DHET) has developed a draft policy on the 'internationalisation of Higher Education in South Africa', which suggests a policy framework on offering collaborative qualifications and degrees. The policy¹⁸ is set to be published in the Government Gazette by 31 March 2017, however until such time, the DHET and CHE have agreed on the following:

- The policy does not bar knowledge mobility; institutions from entering into collaborative research and teaching; or joint degree/qualification offerings; and,
- All programme offerings, which are a local component of collaborative offerings, and qualifications must be accredited by the HEQC as with all other HE programmes.

5.3.3 Timeframes

The timeframes for development and accreditation of academic programmes can be estimated based on the type of programme, the delivery options of the programme, and the accreditation process required. As per the AIA Strategy, the AIA will deliver the postgraduate and undergraduate programmes through the following formats:

- Amended existing programme
- Joint degree programme

With regards to UKZN outsourced programmes, should the AIA decide to develop a dedicated Aerotropolis Development undergraduate degree programme, then UKZN will need to develop a completely new programme. However, it is suggested that existing undergraduate programmes be adjusted by including some aerotropolis-related modules, which will allow for a major in Aerotropolis or Airport City Development.

With a new programme, it can take up to a year from inception to approval by UKZN, and approximately another 2 years for all other CHE and SAQA approval processes, bring the total time required from inception to roll-out of a new programme to approximately 3 years. Should an existing programme be adjusted (can be adjusted up to 50% of the original course content), this process can be quickened to around a year in total. For joint degree programmes, these timeframes will be similar to adjusting an existing degree, although this will also depend on the regulatory processes of the partner institution.

¹⁸ DHET Draft Policy Framework on Internationalisation of Higher Education in South Africa, 07 April 2016

5.4 Research and Development Operations

As noted in Section 6.2 (Outsourcing and Shared Services), research will be outsourced to various school and colleges within UKZN as well as other universities or organisation that undertake research of a similar nature. For research undertaken the various UKZN schools and colleges, the MOU that will be signed between the AIA and UKZN for outsourcing of operations and offerings will articulate how research is undertaken between the AIA and schools and colleges. The MOU will also outline the process for the establishment of a research chair for the AIA within UKZN, while UKZN Foundation be utilised to assist in identifying and facilitating funding to establish this research chair.

5.4.1 Research Options

Various options will be explored by the AIA in terms of research. One option is for the AIA to identify research topics (through its Advisory Board and/or through stakeholder consultation) develop research proposals in line with this, and present these to UKZN Schools and/or Colleges and other universities and research institutions (or put out a call for research in relation to these topics/research proposals). Additionally, the AIA can pitch various research proposals to industry stakeholders who might require research to be undertaken, and these stakeholders can contract the AIA to undertake this research on their behalf. These same research proposals can be utilised to apply for grant funding for aerotropolis research through various funding agencies – the AIA will make use of relationships that UKZN Foundation has built in order to access these funding sources. In general, the AIA will also promote its research capabilities in order to ensure that stakeholders locally and internationally are aware that this can be pursued as a channel for aviation-related and aerotropolis research.

An additional research model that can be explored is the ‘consortium model’. Through its engagements with stakeholders within the aviation and related industries, the AIA can identify possible stakeholders to form a consortium. These stakeholders will then pay a subscription fee to the AIA in order to be part of the consortium, and agreement can be reached between the consortium and the AIA in terms of research outputs. Research can be on an *ad hoc* basis, or provided as an annual service. The Advisory Board can either develop various research proposals that can be presented to the consortium for selection, or agree upfront on a specific research focus for the consortium (e.g.: annual publication or new topic annually).

5.4.2 Intellectual Property

The Intellectual Property Rights from Publicly Financed Research and Development Act (Act No. 51, 2008), also known as the IRP Act, was developed to ensure that intellectual property (IP) outcomes from publically financed research and development (R&D) “is identified, protected, utilised and commercialised for the benefit of the people of the Republic, whether it be for a social, economic, military or any other benefit¹⁹”. The act applies to intellectual property emanating from publicly financed research and development, and seeks to ensure that:

- a recipient of funding from a funding agency assesses, records and reports on the benefit for society of publicly financed research and development;
- a recipient protects intellectual property emanating from publicly financed research and development from appropriation and ensures that it is available to the people of the Republic;
- a recipient identifies commercialisation opportunities for intellectual property emanating from publicly financed research and development;
- human ingenuity and creativity are acknowledged and rewarded;
- the people of the Republic, particularly small enterprises and BBBEE entities, have preferential access to opportunities arising from the production of knowledge from publicly financed research and development and the attendant intellectual property;
- following the evaluation of a disclosure, researchers may publish their research findings for the public good; and
- where necessary, the State may use the results of publicly financed research and development and the attendant intellectual property in the interest of the people of the Republic.

The Act notes that intellectual property emanating from publicly financed research and the recipient shall own development. With regards to public entity or organisation ownership of IP, the Act states that any private entity or organisation may become a co-owner of the intellectual property emanating from publicly financed research and development undertaken at an institution if:

- a) there has been a contribution of resources, which may include relevant background intellectual property by the private entity or organisation;

¹⁹ South Africa Government Gazette No 31745: Intellectual Property Rights from Publicly Financed Research and Development Act (Act No. 51, 2008)

- b) there is joint intellectual property creatorship;
- c) appropriate arrangements are made for benefit-sharing for intellectual property creators at the institution; and
- d) The institution and the private entity or organisation concludes an agreement for the commercialisation of the intellectual property.

Additionally, a funder can take ownership of IP generated through the AIA if the research is undertaken through a full cost model.

In terms of IP in relation to publishing of journal articles, the AIA can be accredited with the published work if the researchers are affiliated to the AIA. The IP still however will remain with UKZN or the university through which the research was generated.

5.5 Business Premises

As per the stages of development presented in Section 5.1, the first two years relate to the incubation stage in which the AIA will operate under the university, outsourcing all activities and staff (besides a shared General Manager and dedicated administrator). As such, the AIA does not require dedicated premises, and will share the current office facility of UKZN InQubate during this period. As the AIA transitions further into the growth stage and dedicated staff is employed, the AIA will identify space within the current UKZN structures and be co-located within UKZN. Plans have been mooted for UKZN's Graduate School of Business and Leadership to relocate to the Umhlanga area, and should these plans go ahead, the AIA could be co-located in these premises. When the AIA reaches maturation, from the fifth years onwards, a dedicated AIA premises will be rented which will consist of offices, lecture theatres, and boardrooms, which will be able to accommodate a full staffing and student compliment. At this stage however, the AIA will still retain a strong physical presence at UKZN in light of the Institute's affiliation.

6 Marketing Plan

6.1 Market Overview

The market in which the AIA is being positioned to operate is very unique in that it combines the provision of training and research in businesses that take place inside and outside the airport fence. Whilst aviation training is focussed through offerings by dedicated institutions like Embry-Riddle and aviation academies, what happens around the airport is somewhat not seen as related to aviation. For instance, urban planning and design for land parcels around an international airport are largely not offered as linked to aviation. The uniqueness of the AIA is that it seeks to develop education programmes that will integrate in some respects the skills requirements inside and outside the airport fence.

The international aviation training market is still dominated by industry bodies like ICAO, ACI, IATA, TIACA, etc. and some major universities and colleges. Some of the aviation training is offered by private entities like the Manchester-base ASM, but such offerings are largely short programmes that are offered over 3 to 10 days. The African market is characterised by an array of accredited training courses, programmes, and diplomas in all aviation-related fields from safety and air navigation to airport and airline management. Within Africa however, the focus is still more on pilot training with less on offer in science of aviation (aviation engineering, operations and maintenance) and aviation management (airport business operations). These programmes are still being offered by the aforementioned industry bodies directly or outsourced to some of the academies like the ATNS Academy, ACSA Academy, etc.

6.2 Differentiation

There is inherent risk of the AIA being seen as just another training academy competing in a very crowded aviation training market. It is therefore imperative that the AIA be uniquely positioned as filling a gap in the market place rather than offering the same programmes that are currently on offer from the industry players. The most **unique selling point** or **value proposition** for the AIA is that it will *combine skills sets that support businesses inside and outside the airport fence*. This in essence is the foundation premise on which the aerotropolis concept is based.

6.3 The Marketing Mix

6.3.1 Product

The AIA offerings will be in two categories, viz., educational programmes and research. Educational programmes will be split into short courses and formal degree programmes. The third product offering that the AIA will be involved will be in developing the body of knowledge in the aerotropolis environment through research. These products are detailed in Section 3.4.2, which provide information about the core offerings of the AIA.

The AIA offerings from incubation to maturity can be summarised as per the Figure 7a below:

<p style="text-align: center;">SHORT PROGRAMMES</p> <ul style="list-style-type: none"> ① Aerotropolis Master Class ② Route Development ③ Air Cargo Supply Chain 	<p style="text-align: center;">RESEARCH</p> <ul style="list-style-type: none"> ① Build aerotropolis body of knowledge ② To inform the development of formal programs
<p style="text-align: center;">POSTGRADUATE</p> <ul style="list-style-type: none"> ① HDip in Aerotropolis Management ② Honours and Masters Programs – Engineering and Commercial streams ③ MBA 	<p style="text-align: center;">UNDERGRADUATE</p> <ul style="list-style-type: none"> ① Core aviation programs ② Built environment, planning, economics, innovation, etc.

Figure 7a – AIA Offerings

6.3.2 Price

In pricing its offerings the AIA will have an option of using two strategies, viz., Market-Skimming Pricing or Market-Penetration Pricing. Market Skimming is used if an entity has developed a superior product with a captive market and takes advantage of this position by charging higher prices. As a Non-Profit Company this pricing strategy may neither be appropriate nor ethical for the AIA in that its main founding objectives is not to maximise profits.

Market-Penetration Pricing is when an entity prices below its competition to gain market share. Since the AIA will not be seeking to compete directly with existing training providers, this strategy would also not be appropriate due to the fact that the AIA offerings will be unique in the market place.

Other pricing strategies that would be more suitable to the AIA are the Customer Value-Based and Cost-Based Pricing. Customer Value-Based Pricing uses the buyers' perception of value as opposed to the Cost-Based Pricing, which uses the seller's cost as key to pricing. A combination of these two pricing strategies will be most suitable for AIA, which has to cover its costs whilst still giving value for money to its customers.

Short Course Pricing

Some of the short courses that are on offer from various international entities like ASM and Terrapin cost between R45,000 to R60,000 per person for a 3 to 5-day course. Terrapin is currently offering a 3-day Master Class in Airport Management for R49,725 in Johannesburg and ASM is charging over R50,000 for a 3-day course on Fundamentals of Route Development.

The biggest costs in providing short courses are those associated with the presenters like their fees, travel and subsistence. The AIA is planning to have these costs funded separately so that they are not passed on to trainees. To this end AIA will solicit sponsorships for bringing international presenters so that it can keep the costs per participant in the region of R12,000. Whilst these short courses will be targeted at middle to senior managers, most of whom will be from government and SOEs involved in developing aerotropoli. A 20% surcharge will be added for participants from private sector entities.

Research Pricing

During the incubation and possibly the growth stages of the AIA all research will be outsourced to UKZN and other partner entities. The AIA will retain 20% of all funding raised for research and will pay the remaining 80% to the entity that will be carrying out the research. Pricing for all research projects will be Cost-Based and the AIA will add the 20% levy, which will form the income. This income will be used to cover the AIA's operating costs that could include a research coordinator or chair.

Pricing Formal Degree Programmes

The pricing of formal degree programmes will in accordance with the fee structures of UKZN and other partner universities and institutions. However the AIA will add a **20% management fee** on all programmes that are offered through those institutions and brokered through the AIA.

6.3.3 Place

This section of the Marketing Plan deals with the channels through which the AIA will be delivering its training programme and executing its research projects.

Research Projects

During the first two years of its operation or incubation stage the AIA will be relying primarily on UKZN capacity to execute its research projects. The AIA will enter into ad-hoc agreements with various schools within the University to assist it with its research projects. The AIA will still remain the custodian of these research projects, but will merely be outsourcing their execution to the UKZN.

Short Courses

During the incubation stage the AIA will offer its short courses through primarily the UEL, but this relationship will not be exclusive. The AIA will develop the content of these programmes in collaboration with presenters but will use the UEL accreditation system and the UKZN certification process. To the extent that it is financially sound these short programmes will be offered at the Latitude Conference Centre at Dube Trade Port. The choice of this venue is not only about convenience as it is 2 km from the King Shaka International Airport, but it will serve to position the AIA at the heart of the Durban Aerotropolis.

As the AIA moves from incubation to growth stage it will explore other opportunities like the use of online platforms to deliver the courses. In some instances some of the material will be delivered through webinars and pre-recorded or live video links.

Formal Degree Programmes

As is the case with the short courses the AIA will work very closely with UKZN schools in developing or customising certain undergraduate and postgraduate degree programmes that will be aligned to the aerotropolis concept. In certain instances the AIA will partner with other local and international universities to develop such aerotropolis degree programmes. Some of these degrees could be offered jointly with UKZN.

6.3.4 Promotion

The first step in launching the AIA promotional campaign is to identify its core target market. Since the vision of the AIA is to develop the next generation of aerotropolis professionals in

Africa who will be involved in building aerotropolis around some of the major international airports in the continent. Various international airports, civil aviation authorities, cities in which those airports are located, provincial/state governments, national transport departments, etc. already employ some of these future aerotropolis experts. Others are still completing their tertiary education and are aspiring to enter the aviation and related sectors.

During the incubation and growth stage the AIA will have two categories of customers and these will be the aforementioned entities and the individuals who are currently employed by those entities. Once the AIA has reached the stage of maturity and has developed formal degree programmes its target market will broaden to include those who will be starting their tertiary education. For research projects that will be undertaken by the AIA these entities will be the beneficiaries of the body of knowledge that will be developed. Some of the research projects will be commissioned directly by these entities.

In communicating customer value and building long-lasting customer relationship AIA's Promotional Mix will entail the use of various tools that are now outlined hereunder.

6.3.4.1 Corporate Identity and Branding

The AIA has developed this interim corporate identity or brand as central to its communication strategy and positioning of the AIA as a unique aerotropolis training and research institute. This corporate identity will be applied in various marketing material that will include but not limited the following:

- Stationery;
- Pull-up banners;
- Interview backdrops;
- Flyers;
- Brochures;
- Corporate gifts; etc.

This corporate identity will be used during the incubation stage but when the AIA progress to growth stage it will need to be rebranded and repositioned in accordance with its improved profile.

6.3.4.2 Advertising

Message

Advertising strategy for the AIA will start with the creation of a clear message that the Institute wishes to communicate. This message will be centred on the AIA's value proposition as an aerotropolis training and research Institute. With a clear definition of the product offerings of the AIA and clear identification of the target market, the AIA will brief a creative team to develop a message that will resonate with the intended audience. This message will present a compelling "big idea" and will get potential customers to think about the AIA and its offerings in a memorable way. To achieve this the message will be meaningful, believable and distinctive (Kotler, Armstrong: 2014).

Media

The second part of the advertising strategy will be to select media through which the message will be communicated. This may prove to be a very daunting task given the fact that the communication channels have been "disrupted" by the advent of social media in the past 5 years or so. The first step will be to determine reach, frequency and impact. During the incubation stage the AIA will have very minimal advertising budget and it will have to be very creative in maximising its reach to its target market.

The next step will be to choose among major types of media, which will include the following:

- Television;
- Print media;
- Direct mail;
- Social media;
- Radio;
- Outdoor;
- Internet; etc.

Selection of which media to use will be determined by the media budget. Some of these media channels like television could be too costly for the AIA, especially during the incubation and growth stages. Cheaper options like internet and social media will be explored in the early stages of the AIA development.

The last step in the selection process will be to decide on media timing and this involves scheduling of adverts over a financial year. Given the fact that most educational

programmes will start around February of each year, the timing of advertising will be scheduled from July to October of the previous. This is the period during which potential students decide on what to study the following year. For corporate clients, particularly those in the public sector, this is the period during which they finalise budgets for the financial that start on April 1, 2017.

6.3.4.3 Sales Promotion and Personal Selling

The AIA will develop a database of all potential corporate clients and managers who are involved in any airport or aerotropolis projects. Upon conclusion and approval of this Business Plan the AIA will set up meetings with all those stakeholders that were consulted during the period April to December 2016. The purpose of these meetings will be to present the final AIA Business Plan and sell specific educational programmes, which in the beginning will be the 3 short courses that will be offered by the AIA in the first year.

During these stakeholder meetings the AIA will also be presenting research proposals on key aspects of the aerotropolis development. At the same time the AIA will also be seeking to establish areas on which the stakeholders need to research. In addition to these meetings direct selling techniques will be used, which will include distribution of brochures on specific offerings of the AIA.

6.3.4.4 Public Relations

In addition to all advertising and sales campaigns the AIA will engage in public relations activities that will also have a bearing on marketing the Institute. These activities will include the following:

- **Industry Talks:** The AIA will run breakfast networking sessions on key topics and in partnership with some organisations like the Durban Chamber, KZN Growth Coalition, etc. The AIA will provide a speaker, who could be a UKZN professor, to give insight on key aerotropolis topics.
- **Conferences and Seminars:** The AIA will respond to call for papers and provide speakers in key industry conferences that will promote the AIA.
- **Publications:** These could include position papers on key subjects like “Open Skies and Aviation Regulations”.
- **Guest Lectures:** The AIA will provide guest lectures targeted at various interest groups.
- **UKZN Open Days:** The AIA will participate on UKZN Open Days in order to reach out to prospective students.

7 Human Resource Plan

7.1 Management Board of Directors

The King III Code of Good Practice is widely accepted as guiding principles for good and sound governance. According to these principles good governance is not only about structures, processes and policies; but also about fostering the right culture and behaviour along the overarching principles of responsibility, accountability, fairness and transparency. The application of this Code should be done in the context of what is in the best interest of the organisation. For this reason the Code adopts a flexible “apply or explain” approach to provide an opportunity for the organisation to apply the King III in accordance to the size, nature and complexity of its operations.

To the extent that it is feasible practicable to do so, the AIA will adopt the King III Code of Good Practice for Non-Profit Organisations. In establishing its highest governance structure, the board of directors, the AIA will observe the following guidelines:

7.1.1 Board of Directors

As a collective the directors will provide ethical leadership, which requires that the board governs the Institute in an ethical manner by displaying ethical values of responsibility, accountability, fairness and transparency. In overseeing management, the board will instil those values and develop an ethical culture by setting an example for the whole organisation.

The fiduciary duties of the board of directors will entail the managing the assets of the organisation and is expected to act in the best interest of the organisation. Individual directors need to be well versed with their fiduciary duties in order to avoid personal liability that may arise from breach thereof. In performing their duties members of the board are expected to exercise due care, skill and diligence. Furthermore, they are expected to observe and comply with the provisions of various legislation like Companies Act, Common Law and the Constitution of the AIA.

The chairperson will convene at least four ordinary meetings of the board per year. However special board meetings will be convened at the request of the majority of board members or if necessitated by a statutory requirement. Such special meeting will deal only with the matters for which they have been called.

7.1.2 Appointment of Directors

The appointment of directors to the board will be on the basis of skills and experience required to fulfil the mandate and the vision of the AIA. To maintain a balance of power, the composition of the board will be such that the majority of board members will be non-executive and independent of UKZN. The AIA will have a minimum of three directors and more will be added as per the requirement of certain skill sets and experience.

7.1.3 Chairperson

According to King III principles the board should elect a chairperson who is an independent non-executive director. For instance, this position may not be filled by the CEO nor any of the executive directors. The chairperson provides the direction necessary for the effective board and this position should be filled by someone with very strong leadership skills.

7.1.4 Conflict of Interest

Individual members of the board must at all times avoid placing themselves in situations wherein their personal interests would conflict those of the Institute. To avoid this situation the company secretary will maintain a register of personal interests of directors and directors will recuse themselves from deliberations and decisions that involve transactions wherein they might have direct or indirect interests.

7.2 Advisory Board

The AIA board will appoint an international panel of advisors who will assist the board in staying abreast of international developments and also to manage relationships with international partner organisations and institutions. Members of this Advisory Board will be drawn from the following organisations:

- KZN Government;
- Department of Higher Education;
- UKZN;
- Other Aerotropolis Institutes (Chinese and India);
- Local and international institutions;
- Industry Bodies - IATA, AFRAA, ACI, ICAO, etc.;
- Stakeholder Entities - ACSA, SAA, ATNS, etc.;
- Research Institutions;
- Business Chambers; etc.

This advisory board will meet twice a year but its meetings can be done through video conferencing like Skype to minimise on costs. The functions of this board will be to advise the board of directors on international trends and guide the AIA accordingly.

7.3 Board Committees

In fulfilling its mandate the board will establish board committees to which it will delegate certain functions but without abdicating its responsibilities. The aim of these committees will be to relieve the board of its workload and the AIA board will establish the following committees:

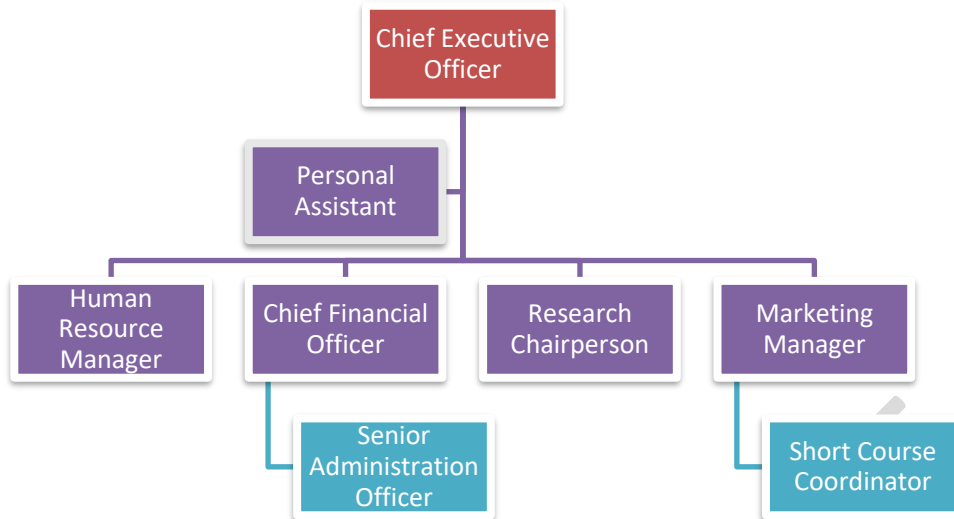
- Remuneration Committee
- Research Committee
- Course Development Committee
- Audit Committee
- Finance Committee

Terms of reference will be developed to spell out the duties and responsibilities of these committees.

7.4 Management and Operational Staff

Other than the three non-executive directors, the AIA will appoint only an Administration Officer and a General Manager (shared with UKZN) during the stage of incubation within UKZN. During this incubation stage the AIA will outsource most of its administrative functions to the UKZN and the board of directors will oversee this. The AIA establishment project team will also assist with the initial operations of the Institute, especially in the incubation stage.

As the AIA enters the growth stage, a Chief Executive Officer will then be appointed along with some senior managers, who will include the Chief Financial Officer, a Research Chairperson, Marketing and Sales Manager, and a Short Course Coordinator. In the maturation phase, when the AIA takes over the payroll, an HR Manager will be appointed. The organogram below displays the HR structure of the AIA in its maturation stage. In addition, the AIA will seek financial commitment for funding to support internships.



The functions of these full time staff members will be as follows:

<p>Chief Executive Officer</p> <p>Requirements:</p> <p>Experience: At least 10 years experience in senior management, preferably in an education institution.</p> <p>Education: Postgraduate degree in management and leadership.</p>	<ul style="list-style-type: none"> - Develop AIA overall strategy in conjunction with the Board; - Lead and oversee the implementation of the AIA long and short term plans in accordance with its strategy; - Organisational risk assessment and management; - Ensure that the Institute maintains high standards of corporate governance and social responsibility; - Provide link between management and the Board; - Manage stakeholder relationships; - Keep abreast of all material undertakings and activities of the Institute and all material external factors affecting it; - In liaison with the Chairperson and Company Secretary develop Board agendas, request that special meetings of the Board be called when appropriate, determine the date, time and location of the annual meeting of shareholders and to develop the agenda for the meeting; - Sit on committees of the Board where appropriate as determined by the Board; - Company's standards and policies, including its environmental, safety and health policies; - Fundraising for the Institute.
<p>CEO's Personal Assistant</p> <p>Requirements:</p> <p>Experience: At least 5 years experience in executive support and administration.</p> <p>Education: Matric plus diploma in office management or secretarial duties.</p>	<ul style="list-style-type: none"> - Provide administrative support for the CEO; - Manage communication between CEO and the senior management; - Provide secretarial support for all meetings of the CEO that include Management Committee meetings and other one-on-one meetings of the CEO; - Provide secretarial support to the Chairperson of the board and all board committees in conjunction with the Company Secretary.
<p>Human Resources Manager</p> <p>Requirements:</p>	<ul style="list-style-type: none"> - Recruitment and hiring of personnel in accordance with the approved structure; - Develop and communicate all HR policies;

<p>Experience: At least 10 years experience in senior HR management, preferably in an education institution.</p> <p>Education: Bachelor's Degree in HR Management.</p>	<ul style="list-style-type: none"> - Support workplace safety and security in accordance with the relevant legislation; - Manage and strengthen employer-employee relationships through job satisfaction, employee engagement and resolving of workplace conflict; - Administer and manage employee compensation and benefits through an outsourced payroll system; - Ensure compliance of the Institute with all labour laws and employment contracts; - Create opportunities for training and development through on-the-job and external training;
<p>Chief Financial Officer</p> <p>Requirements:</p> <p>Experience: At least 10 years experience in senior management, preferably in an education institution.</p> <p>Education: Chartered Accountant registered with the South African Institute of Chartered Accountants (SAICA).</p>	<ul style="list-style-type: none"> - Overall financial planning and management; - Budgeting, forecasting, control; - Accounting: policy, record-keeping, reporting, etc.; - Treasury: financing, banking, investments, risk, liquidity, etc. - Internal control and risk management; - Financial supervision; - Reporting to board and other stakeholders; - Preparation of Annual Financial Statement and attend to internal and statutory audits; - Prepare annual report; - Manage the outsourced accounting services; - Safeguard the assets of the Institute.
<p>Research Chair</p> <p>Requirements:</p> <p>Experience:</p> <p>Education:</p>	<ul style="list-style-type: none"> - Awaiting input from UKZN
<p>Marketing and Sales Manager</p> <p>Requirements:</p> <p>Experience: At least 5 years experience in a marketing department, preferably in similar organisations</p> <p>Education: Bachelor's Degree in Marketing or Diploma in Marketing Management from IMM or similar qualification.</p>	<ul style="list-style-type: none"> - Managing all marketing activities for the Institute. - Developing the marketing strategy in line with AIA objectives. - Co-ordinating marketing campaigns with sales activities. - Overseeing the AIA's marketing budget. - Creation and publication of all marketing material in line with marketing plans. - Planning and implementing promotional campaigns. - Manage and improve lead generation campaigns, measuring results. - Overall responsibility for brand management and corporate identity - Preparing online and print marketing campaigns. - Monitor and report on effectiveness of marketing communications. - Creating a wide range of different marketing materials. - Working closely with design agencies and assisting with new product launches. - Maintain effective internal communications to ensure that all relevant company functions are kept informed of marketing objectives.

	<ul style="list-style-type: none"> - Analysing potential strategic partner relationships for AIA marketing. - Overall responsibility for sales; - Fundraising through sponsorships and grants.
<p>Short Course Coordinator</p> <p>Requirements:</p> <p>Experience: At least 3 years management and/or supervisory experience and in possession of a degree or diploma (min NQF level 6)</p> <p>Education: Bachelor’s Degree or a related equivalent qualification</p>	<ul style="list-style-type: none"> - Manage the design and delivery of short courses - Coordinate all logistical arrangements with regard to short courses - Evaluate service delivery during course - Report on short course progress as required - Budgeting – ensuring that courses are run and maintained within budget - Ensuring that certification for courses is presented to relevant students as required - Customer relationship management systems (CRM) - Booking of course venues and scheduling of courses based on minimum number of students - Coordination and liaison with course developers, facilitators and presenters on scheduling, specialised course requirements and student information - Providing catering, course material, customer satisfaction questionnaires, specialised needs of students, as defined by the relevant checklists - Relaying all post-course information to the relevant stakeholders - Timeous notification to all stakeholders of programme plans - Managing stock and merchandise allocated to courses - Filing and record keeping - Product knowledge and customer relations - Student registration - Ensure that the knowledge of the course content, commencement dates, pricing and costing are understood and communicated to key employees timeously - Work closely with the Finance and Marketing
<p>Senior Admin Officer</p> <p>Requirements:</p> <p>Experience: At least 5 years experience in office administration, preferably in an education institution.</p> <p>Education: Bachelor’s Degree in Administration.</p>	<ul style="list-style-type: none"> - General office administration; - Provide assistance to the CFO; - Custodian for all source documents for financial transactions; - Answer, screen and transfer inbound phone calls; - General clerical duties including photocopying, fax and mailing; - Maintain electronic and hard copy filing system; - Handle requests for information and data; - Resolve administrative problems and inquiries; - Prepare written responses to routine enquiries; - Schedule and coordinate meetings, appointments and travel arrangements for CEO, CFO, other managers and directors; - Prepare agendas for meetings and prepare schedules; - Record, compile, transcribe and distribute minutes of meetings; - Coordinate maintenance of office equipment; - Coordinate and maintain records for staff, telephones, parking and petty cash.

8 Financial Plan

8.1 Financial Model Assumptions

8.1.1 General Assumptions

- a) The financial year
 - a. April – March
- b) Escalation rate
 - a. 6% per annum for income and expenditure
- c) Educational enrolments and research projects

		Year 1	Year 2	Year 3	Year 4	Year 5
Short Course Students	Outsourced	180	240	180	180	240
	Inourced	0	0	180	180	240
Research Projects	Outsourced	2	2	2	3	4
	Inourced	0	0	2	3	4
Postgraduate Students	Outsourced	0	0	0	0	20
	Joint offering	0	0	0	0	20
Undergraduate Students	Outsourced	0	0	20	40	60
	Joint offering	0	0	5	10	30

- d) Human resource allocations

	Year 1	Year 2	Year 3	Year 4	Year 5
General Manager of AIA	1	1			
Chief Executive Officer			1	1	1
Personal Assistant to the CEO			1	1	1
Administrative Officer	1	1			
Senior Administrative Officer			1	1	1
Chief Financial Officer			1	1	1
Marketing and Sales Manager			1	1	1
HR Manager					1
Short Course Coordinator			1	1	1
Research Chair			1	1	1
Post-Doctoral Fellows			5	5	7

8.1.2 Income Assumptions

- a) **Short course cost**
 - a. Based on the cost of the Aerotropolis Master Class and similar short courses undertaken by UEL
 - b. R12,000 per attendee
- b) **Postgraduate cost**

- a. Based on the cost of a postgraduate degree at UKZN
- b. R35,000 per student (both for UKZN and Joint Degree Offerings)
- c) Undergraduate cost**
 - a. Based on the cost of a undergraduate degree at UKZN
 - b. R35,000 per student (both for UKZN and Joint Degree Offerings)
- d) Research**
 - a. The research values below are based on anticipated values for research projects. The AIA will, before final establishment, ensure that letters of intent are sought from potential research partners in order to validate these values.
 - b. R3 million per research project in year 1 and 2
 - c. R4 million per research project in year 2 and 3
 - d. R5 million per research project in year 5 onwards
- e) EDTEA Funding**
 - a. EDTEA Funding for the establishment of AIA
 - b. R1,2 million for the first 2 years
- f) Sponsorship Income**
 - a. Leveraged sponsorship from selected key stakeholders. Before final establishment, the AIA will secure letters of intent from potential sponsors in order to validate these assumptions.
 - b. No sponsorship income in year 1 and 2
 - c. R1 million in year 3 and 4
 - d. R3 million from year 5 onwards
- g) Grant Funding**
 - a. Grant funding from stakeholders to cover travel and accommodation of guest lecturers, speakers and trainers. Before final establishment, the AIA will secure letters of intent from potential grant funders in order to validate these assumptions.
 - b. R1 million per annum from year 3 onwards

8.1.3 Expenditure Assumptions

- a) Capital Expenditure**
 - a) There will be no capital expenditure for the AIA as the AIA will not acquire land or buildings, and any capital expenditure (be it flight or ATC simulators, building infrastructure, etc.) will be investigated in the longer-term, after the AIA reaches maturation and can be sustainable over a number of years.
 - b) Office furniture and equipment (computers, etc.) has been included as a per staff member cost in operational expenses.
- b) Human Resource expenses**

- a. All costs specified in year 1 prices and escalated according to the year in which they are introduced into the AIA at 6% per annum

	Amount	Year 1	Year 2	Year 3	Year 4	Year 5
General Manager of AIA*	R600 000					
Chief Executive Officer	R1 200 000					
Personal Assistant to the CEO	R 200 000					
Administrative Officer	R 250 000					
Senior Administrative Officer	R 350 000					
Chief Financial Officer	R 700 000					
Marketing and Sales Manager	R 450 000					
HR Manager	R 450 000					
Short Course Coordinator	R 400 000					
Research Chair**	R 850 000					
Post-Doctoral Fellows***	R 200 000					

*R1,2 million shared with UKZN (50/50)

**Funded by UKZN Foundation

***Funded by UKZN and/or other sources

c) Operational Expenditure

- a. Educational and Research expenses
- i. Operational cost for fully insourced educational and research offerings
 - ii. 65% of income from insourced educational and research offerings
- b. Travel and accommodation
- i. Local travel and accommodation
 1. R25,000 per annum in year 1 and 2
 2. R35,000 per annum in year 3 and 4
 3. R45,000 per annum in year 5 onwards
 - ii. International travel and accommodation
 1. R200,000 per annum (Cost for 2 AIA Staff)
 2. One (1) trip in year 2
 3. Two (2) trips in year 3 and 4
 4. Three (3) trips in year 5 onwards
- c. Office rental, furnishings and equipment
- i. Office rentals in all operational stages will be the same (rental at UKZN during Incubation and Growth and rentals at an independent location during Maturation)
 - ii. Office rental cost including furniture, internet and telephone setup, security, cleaning, and other related costs per staff member
 - iii. R2000 per annum per member of staff
- d. Computer equipment

- i. Once-off computer hardware and software cost per staff member
 - ii. R15,000
 - e. Utilities
 - i. Water and electricity costs per staff member
 - ii. R500 per month
 - f. Internet and Telecommunications
 - i. Mobile phone and data costs per staff member
 - ii. R1,500 per month
 - g. Printing and Stationery
 - i. Office stationery and printing expenses per staff member
 - ii. R500 per month
 - h. IT Support Costs
 - i. IT support costs not covered by the Management Fee
 - ii. R10,000 per month
 - iii. Covered by Management Fee in year 1 and 2
 - iv. 50% covered by Management Fee in year 3 and 4
 - v. 100% payable in year 5 onwards (no management fee)
- d) Professional Fees**
 - a. UKZN Management Fee
 - i. Management fee for financial management, payroll, IT Support, accounting, board meeting support services, etc. outsourced to UKZN
 - ii. 1% of gross income
 - 1. 100% for year 1 and 2
 - 2. 50% for year 3 and 4
 - 3. 0% for year 5 onwards
 - b. Research and Educational Grants
 - i. Research and educational grants issued to UKZN and other universities, research institutions and private organisations for outsourcing of research projects, postgraduate and undergraduate degree offerings
 - ii. 80% of income from outsourced educational and research offerings
 - c. Board of Director Remuneration
 - i. Remuneration for Board Members per Meeting
 - ii. R3,000 per board meeting
 - iii. R8,000 for travel for two (2) out-of-town board members
 - iv. Two (2) board meetings per annum
 - v. Number of Board Members
 - 1. Three (3) in year 1 and 2
 - 2. Five (5) in year 3 and 4
 - 3. Seven (7) in year 5 onwards
 - d. Legal Costs
 - i. Legal costs for the AIA
 - ii. R50,000 per annum

- e. Consulting Costs
 - i. Consulting costs for the AIA per annum
 - ii. R80,000 per annum
- f. Audit Fees
 - i. External annual statutory audit fees
 - ii. 1% of gross income per annum

8.2 Summary Income and Expenditure Projections

Income	Year 1	Year 2	Year 3	Year 4	Year 5
Educational Offerings	R2 160 000	R3 052 800	R5 837 102	R7 229 467	R13 016 137
Short Courses	R2 160 000	R3 052 800	R4 853 952	R5 145 189	R7 271 867
Postgraduate Coursework Offerings	R0	R0	R983 150	R2 084 278	R3 976 802
Undergraduate Offerings	R0	R0	R0	R0	R1 767 468
Research Offerings	R6 000 000	R6 000 000	R16 000 000	R24 000 000	R40 000 000
Consulting/Funded Research	R6 000 000	R6 000 000	R16 000 000	R24 000 000	R40 000 000
EDTEA Establishment Funding	R1 200 000	R1 200 000	R0	R0	R0
Funding from EDTEA for Establishment of the AIA	R1 200 000	R1 200 000	R0	R0	R0
Other Income	R0	R0	R2 000 000	R2 000 000	R4 000 000
Sponsorship Income	R0	R0	R1 000 000	R1 000 000	R3 000 000
Grant Funding Income	R0	R0	R1 000 000	R1 000 000	R1 000 000
Total Income	R9 360 000	R10 252 800	R23 837 102	R33 229 467	R57 016 137

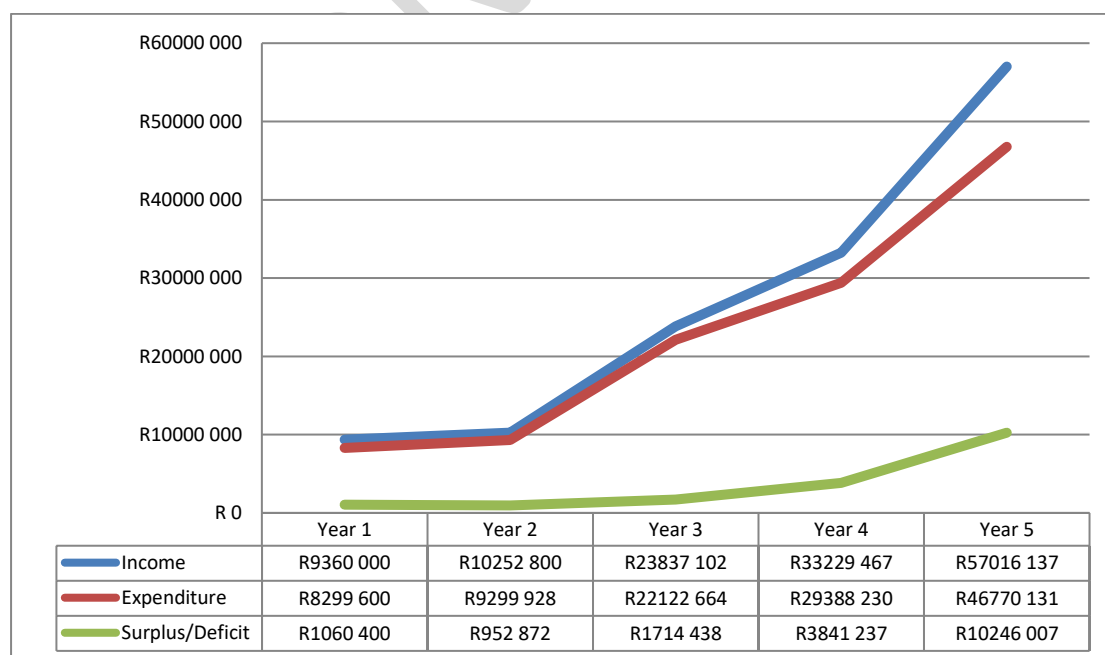
Expenses	Year 1	Year 2	Year 3	Year 4	Year 5
Staff Expenses	R850 000	R901 000	R3 707 880	R3 930 353	R4 734 289
General Manager	R600 000	R636 000	R0	R0	R0
CEO of AIA	R0	R0	R1 348 320	R1 429 219	R1 514 972
Senior Administrative Officer	R0	R0	R393 260	R416 856	R441 867
Administrative Officer	R250 000	R265 000	R0	R0	R0
Personal Assistant to the CEO	R0	R0	R224 720	R238 203	R252 495
Chief Financial Officer	R0	R0	R786 520	R833 711	R883 734
Marketing and Sales Manager	R0	R0	R505 620	R535 957	R568 115
Human Resources Manager	R0	R0	R0	R0	R568 115
Short Course Coordinator	R0	R0	R449 440	R476 406	R504 991
Research Chair	R0	R0	R0	R0	R0
Post-Doctoral Fellows	R0	R0	R0	R0	R0
Operating Expenses	R438 000	R632 480	R8 561 583	R11 184 626	R17 734 272
Educational and Research expenses	R0	R0	R6 777 534	R9 472 186	R15 363 357
Travel and Accommodation	R300 000	R518 000	R820 000	R869 200	R1 140 000
Office rental, furnishings and equipment	R48 000	R50 880	R323 597	R343 013	R454 492
Computer equipment	R30 000	R0	R168 540	R0	R56 811

Expenses	Year 1	Year 2	Year 3	Year 4	Year 5
Utilities	R12 000	R12 720	R80 899	R85 753	R113 623
Internet and Telecommunications	R36 000	R38 160	R242 698	R257 259	R340 869
Printing and Stationery	R12 000	R12 720	R80 899	R85 753	R113 623
IT Support Costs	R0	R0	R67 416	R71 461	R151 497
Professional Fees	R7 011 600	R7 766 448	R9 853 200	R14 273 252	R24 301 570
UKZN Management Fee	R234 000	R256 320	R297 964	R415 368	R0
Educational and Research grants	R6 528 000	R7 242 240	R9 128 101	R13 325 498	R23 504 163
Board of Directors Remuneration	R26 000	R27 560	R42 697	R45 259	R63 124
Legal Costs	R50 000	R53 000	R56 180	R59 551	R63 124
Consulting Costs	R80 000	R84 800	R89 888	R95 281	R100 998
Audit Fees	R93 600	R102 528	R238 371	R332 295	R570 161
Total Expenses	R8 299 600	R9 299 928	R22 122 664	R29 388 230	R46 770 131

Surplus/Deficit	R1 060 400	R952 872	R1 714 438	R3 841 237	R10 246 007
Cumulative Surplus/Deficit	R1 060 400	R2 013 272	R3 727 710	R7 568 947	R17 814 954

8.3 Projected Cash Flows

The projected income will be modest in the first two years whilst the AIA is developing educational programmes and research projects. However in the third year the Institute will have developed its internal capacity to deliver some of its educational programmes and research projects that will increase its income.



8.4 Breakeven Analysis

In order to give more perspective to the assumptions on which the financial projections are based, it is necessary to also look at the breakeven of the AIA. This tool measures the minimum income required to ensure that the AIA does stays solvent especially in the first two years of its incubation. The breakeven point refers to the level of turnover where the expected gross income is equal to the estimated operating costs.

The breakeven point for the AIA in the first five years based on the above financial projections can be calculated as follows:

Breakeven Analysis	Year 1	Year 2	Year 3	Year 4	Year 5
Gross Income	R2 832 000	R3 010 560	R14 709 001	R19 903 969	R33 511 974
Gross Margin %-age	30%	29%	62%	60%	59%
Operating Expenses	R1 771 600	R2 057 688	R12 994 563	R16 062 732	R23 265 968
Breakeven Turnover	R5 855 288	R7 007 687	R21 058 719	R26 816 563	R39 583 929

The breakeven turnover is minimum income that the AIA will have to raise in order to break even. During the first year the AIA will have to raise R5.9 million, R7 million in the second year and so forth. Given the fact that R1.2 million has already been secured in each of the first two years the minimum income that will have to be raised in the first two years is R4.7 million and R5.8 million respectively.

8.5 Start-up Capital and Seed Funding

The KZN Department of Economic Development, Tourism and Environmental Affairs (EDTEA) has committed funding towards establishment of AIA, which will be fully funded up until March 2019 (end of Year 2). The funding is directed towards personnel who are responsible for setup up the AIA as an approved institute, developing courses and course material, running master classes and short courses and initiating research and supervisory capacity – essentially, the Managing Director and the Administration Officer.

The AIA has the potential to generate income during its start-up phase through the following funding channels in the form of research (grant/funded/consulting) income:

- UKZN Foundation;
- National Research Foundation (NRF);
- Development Bank of South Africa (DBSA);
- Technology Innovation Agency (TIA);
- Council for Scientific and Industrial Research (CSIR);
- National Department of Transport (NDoT)

- National Department of Science and Technology (NDST)
- Airports Company South Africa (ACSA);
- South African Airways (SAA);
- KZN Department of Economic Development Tourism and Environmental Affairs (KZN EDTEA);
- Municipality funds;
- EU funded programmes, NSF (USA), JICA (Japan);
- USAID;
- World Bank;
- International grants through SA Bilateral agreements.
- KZN/National priorities research grants and joint research ventures with other universities;
- Consultation contracts;
- Joint stakeholder research consortium funds.

8.6 Accounting Policies and Internal Control

As the AIA will contract UKZN to undertake all financial management (including accounting), administration, and human resource management during the Incubation Phase, UKZNs accounting policies and internal controls will be adhered to during this time. From the growth stage, the AIA would need to adopt its own internal accounting policies and controls.

9 Implementation Plan

The implementation of this Business Plan in the first two years will coincide with the establishment phase of the AIA, which is expected to be completed in March 2019. This period will be an opportunity for the AIA to test the assumptions on which the financial projections are based. It is therefore necessary to have these assumptions reviewed during the fourth quarter of the first year of operation.

During the Incubation Stage (first 2 years) the AIA will assume minimal risks by outsourcing most of its functions to the UKZN. However for the purposes of good corporate governance the AIA will be registered fully as a Non-Profit Company before April 1, 2017 and the minimum number of directors will be appointed. All other statutory registrations like those for company, employee taxes and VAT will be done after the UKZN Council has approved the AIA establishment.

9.1 Deliverables and Milestones

The table below provides a breakdown of the key deliverables and milestones that the AIA wishes to achieve:

Deliverables and Milestones	Due Date	Year				
		1	2	3	4	5
Appointment of Board of Directors	31 January 2017	█				
Memorandum of Incorporation	31 January 2017	█				
Appointment of General Manager and Administrator	28 February 2017	█				
Registration of the NPC	28 February 2017	█				
College Academic Affairs Board Approval	28 February 2017	█				
Executive Management Committee Approval	28 February 2017	█				
Presentation of final draft of Business Plan to stakeholder and solicitation of their support and commitment	28 February 2017	█				
Senate Approval	15 March 2017	█				
Council Approval	31 March 2017	█				
Opening of a Bank Account	31 March 2017	█				
First Short Course	01 April 2017	█				
First Research Project	01 April 2017	█				
SARS registrations (PAYE, PBO Status)	31 December 2018		█			
Appointment of CEO and additional staff	01 March 2019			█		
UKZN Postgraduate programme	01 April 2019			█		
Appointment of final staff	01 March 2020				█	
Joint Postgraduate programme	01 April 2020				█	
UKZN Undergraduate programme	01 April 2021					█

Annexures

CVs of Project Team and Staff

To be included

Criteria for Registration of Qualifications and Part Qualifications on the NQF

- 1) Qualifications and part qualifications for registration on the NQF must:
 - a) Be recommended and submitted to SAQA for registration by a Quality Council
 - b) Comply with the Criteria for registration
 - c) Be written in English
 - d) Meet the criteria as laid down by the Sub-framework for the qualification/part qualification type
- 2) Qualifications and part qualifications for registration must be submitted in the following format:
 - a) Title: The qualification title must comply with the qualification type description provided for in the relevant Sub-framework of the NQF
 - b) Sub-framework: The Sub-framework on which the qualification is to be registered must be provided
 - c) Field and Sub-Field [this may include, where applicable, the Classification of Educational Subject Matter (CESM) category and/or Organising Framework for Occupations (OFO) code]
 - d) Level of the Qualification: The published level descriptors must be used to help determine the level of the qualification. The level of a part qualification may be at the same level as the parent qualification or at a level within the range allowed for in the qualification type.
 - e) Credits: The credits must be calculated on the basis of one (1) credit is equal to ten (10) notional hours of learning. The minimum credit allocation for a qualification must comply with the requirements for the qualification type as determined within the relevant Sub-framework of the NQF
 - f) Rationale: The rationale should:
 - i. Provide details of the reasoning that led to identifying the need for the qualification
 - ii. Indicate how the qualification meets specific needs in the sector for which it is developed.

- iii. Details of consultation with a recognised professional body or industry body must be provided in respect of the need
 - iv. Identify the range of typical learners and indicate the occupations, jobs or areas of activity in which the qualifying learners will operate
 - v. Indicate the learning pathway where the qualification resides
 - vi. Indicate how the qualification will provide benefits to the learner, society and the economy.
- g) Purpose
- i. The purpose should describe the context of the qualification or part qualification and what it is intended to achieve in the national, professional and/or career context
 - ii. The purpose statement should capture what the qualifying learner will know and be able to do on achievement of the qualification or part qualification. The Exit Level Outcomes must be linked to the purpose of the qualification. Graduate attributes may be used where appropriate.
- h) Rules of Combination: There must be coherence between the constituent parts of the qualification.
- i) Entry Requirements: The minimum entry requirements to the qualification must be stated. The entry requirements should be aligned to the approved institutional/provider admissions policies.
- j) Exit Level Outcomes and Associated Assessment Criteria:
- i. The exit level outcomes, which are framed against the level descriptors, should indicate what the learner will be able to do and know as a result of completing the qualification or part qualification. These competencies relate directly to the competencies required for the further learning and/or the work for which the qualification or part qualification was designed
 - ii. Associated assessment criteria are written for the qualification or part qualification to indicate the nature and level of the assessment associated with the qualification or part qualification and how the exit level outcomes could be assessed in an integrated way. The criteria can be given as a comprehensive set derived from the level descriptors.
- k) International Comparability: A statement on how the qualification compares with or relates to similar qualifications or best practices or standards offered in other parts of the world must be given. The Quality Councils will apply this in a manner appropriate to their relevant sector and Sub-framework. Qualifications that are internationally comparable could assist in determining the articulation possibilities of the qualification with qualifications in other national and regional qualification frameworks

- l) Integrated Assessment: The assessment undertaken to determine the learners' applied competence and successful completion of learning in the qualification must be stated. This could include reference to formative and summative assessment; ratio of assignment work to academic examinations; the role of work integrated learning; other forms of integrated learning; and its assessment
- m) Recognition of Prior Learning (RPL): Institutional RPL policies must clearly state how RPL will be applied to gain entry to or achieve the qualification. The RPL policies of the Quality Councils and/or providers must be made available to SAQA upon such request. The RPL policies of education, training and development providers must be aligned to the national SAQA RPL Policy.
- n) Articulation: A statement describing the horizontal, vertical and diagonal articulation possibilities within the relevant Sub-framework and between Sub-frameworks, must be provided, where appropriate.