

AFRICAN KNOWLEDGE EXCHANGE (AKE) *Creative Media Venture*

**END OF PROJECT
REPORT**

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PROJECT DETAILS

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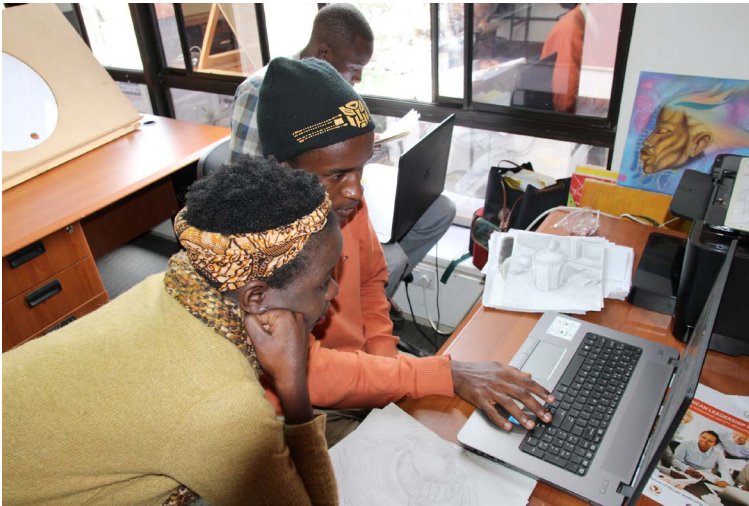
Table of Contents

List of Abbreviations.....	4
1. Project Summary	5
Project results: outputs, outcomes and impact	5
Beneficiaries and stakeholders.....	6
Key recommendations	6
2. Progress towards achieving results	8
Achievement of outcomes	8
Impact.....	9
Relevance, effectiveness and efficiency.....	9
Sustainability.....	9
Cross-cutting objectives.....	9
3. Assumptions, risks and opportunities.....	10
New opportunities	10
4.Resource allocation.....	13
5. Management and coordination arrangements.....	14
6. Lessons learnt.....	15
7. Recommendations.....	16
Annexes.....	17
Annex 1: GESCI - Results Framework: Harmonization of Project Outcomes into Organizational Results Framework.....	17
Annex 2: AKE Main Activity Report 2016 - 17	19
Annex 3: AKE Policy Forum Recommendations.....	32
Annex 4: Inventory List.....	35
Annex 5: List of publication/ documents/studies.....	35
Annex 6: Summary Financial Report	35

List of Abbreviations

AKE.....	African Knowledge Exchange
AUC.....	African Union Commission
CEO.....	Chief Executive Officer
DCM.....	Digital Creative Media
GESCI.....	Global E-Schools and Communities Initiative
LL	Living Lab
MERL	Monitoring, Evaluation, Research and Learning
MFAF.....	Ministry for Foreign Affairs of Finland
MICT.....	Ministry of Information Communications Technology
RAF.....	Results Assessment Framework
TVSD.....	Technical Vocational Skills Development

PROJECT SUMMARY



AKE Participants at the GESCI Media Lab in Nairobi during training

This report represents the final cycle of funding GESCI received from the Ministry for Foreign Affairs of Finland (MFAF) and reports on the outputs, outcomes and impact of the implementation of the African Knowledge Exchange (AKE) Creative Media Venture during the period January 2016 - June 2017.

The project was planned to conclude at the end of December 2016, but GESCI requested for an initial non-cost extension to end March 2017 and subsequently for a further non-cost extension to end June 2017, both of which were granted by MFAF.

The 2016-17 AKE cycle concludes the 3 cycles of funding GESCI received from MFAF for the AKE digital skills and enterprise development initiative viz.: AKE I (2012-13); AKE II (2014 - 15) and AKE III (2016-17). The AKE initiative over the 3 cycles incrementally tested, refined and built a replicable and scalable model for digital skills and enterprise development, which could be applied to other TVSD sectors to contribute to more opportunities for youth employment.

Project results: outputs, outcomes and impact

The objectives of the AKE 2015 -16 Project were to:

1. Consolidate and deepen the digital skills development for the Digital Creative Media (DCM) industries to industry standard and to match them with industry demand and requirements.
2. Through the LL research identify the opportunities, challenges and solutions for youth skilling and enterprise development and investigate synergies between the skills and business components to align high level skills training (leadership, enterprise, communication, critical thinking, team work, creativity, digital literacy) more flexibly with the real and ever changing needs of the emerging and new technology driven industries of the 21st century knowledge economies.
3. Develop and test the trajectory for viable start-ups. This is part of the research process.
4. Develop an innovation framework for digital skills development that governments, their agencies and other entities could draw on for youth skilling and enterprise development.

The above objectives were realized in the following way:

In the 2016-17 cycle, the AKE project refined and consolidated the innovative and scalable training model by combining high level skilling to commercial - standards with entrepreneurial abilities and the actual formation of start-ups in the digitally - driven creative and cultural arena. This is the outcome which flowed from the activities and outputs. The model that emerged incorporates various supports needed for the creation of start-ups.

The model can be applied with the necessary contextualisation to other traditional employments in service areas and to new and emerging ICT-based service opportunities for start-ups and self-employment. ***Throughout the 3 cycles of implementation we strived to encourage the participation of young women and in 2016 we sought particularly to increase the participation of young women in skills development in the Digital Creative Media (DCM) project with 9 young women finally graduating and receiving seed funding for their start-ups.***

The following are specific outputs:

- **Integrated training curriculum** implemented over 3 phases
- **20 participants graduated** at the end of the training period having been upskilled and trained to DCM industry standards, of which 9 were young women.
- **A digital portal** (<https://gesciakemediaventure.net/>) set up to support both the AKE Living Lab (LL) research and the DCM community
- **AKE presentation and showcasing at Banjul+10 event** on May 10th-11th 2016 in Banjul, Gambia. A start-up from the AKE initiative was showcased as a key item on the main agenda during the youth charter event.

- **AKE endorsement** as part of the African Union Commission's (AUC) youth programme for the next three years 2017-2020 as a result of the Gambia event.
- **Partnerships established** with DCM industry in Kenya to support trainees and 29 DCM industry experts providing their expertise and skills input on course development and design, market trends, industry constraints and industry best practices during the Roundtable and Solution Design workshop and during the entrepreneurial practice and start-up incubation phases.
- **7 Start-ups organically formed**, legalized and set up for business with seed funding and some with commissioned work (AKE Policy Forum report with appendix overview of start-ups and submitted as a separate document).
- **Living Lab research** which refined and consolidated the digital skills and enterprise development model and from which the AKE mixed methods approach emerged (The AKE Model and Living Lab Research Reports are deliverables and submitted as separate reports).
- **Policy Forum** with relevant government ministries, agencies, DCM industry partners, iHubs, young entrepreneurs and potential investors producing policy recommendations to create a more conducive environment youth skilling and enterprise development. (The Policy Recommendation document is one of the deliverables of the period and submitted as a separate document).

Beneficiaries and stakeholders

The primary project beneficiaries were:

1. 20 Kenyan youth mainly from disadvantaged groups who were provided access and participation in high level skills training to prepare them for employment and enterprise development in the DCM industries.
2. 3 local Kenyan tutors who implemented the training and skilling and also benefited as they were trained and exposed to the latest skills development, pedagogical approaches and technologies in the skills domains (gaming, graphic design, music production, animation) by the 2 Irish master tutors from Ballyfermot College of Further and Higher Education. They were also exposed to industry level training standards through collaboration with Kenyan entrepreneurs and industry partners on the student projects.

The secondary beneficiaries/stakeholders were the network partners consisting of relevant Government departments and agencies, DCM industry partners, researchers and experts who collaboratively engaged on the AKE training and LL research and contributed to the consolidation of the model.

Key recommendations

- Ensure participant centeredness through a selection process that takes into account individual circumstances/needs and needs of the inter-disciplinary teams and develop and implement a flexible and relevant curriculum informed by continuous multi-stakeholder dialogues and contribution.
- Involve critical and multiple stakeholders and partners from policy makers to industry partners, experts, entrepreneurs, tutors and students in all the processes from design of the training to implementation, mentoring, monitoring and evaluation.
- Carry out needs analyses at student, tutor and industry levels to ensure that the training and skilling will address their needs and training will be meeting the requirements of the industry.
- Follow a holistic, integrated, inter-disciplinary, collaborative team working and practice-based approach supported by the required level of infrastructure and technology tools in training and skilling to foster 21st century skills.
- Build strong partnerships with industry to ensure relevance and quality of training and products, but also for support during the incubation of start-up phase and commissioning of work.

1. Project background

The Ministry for Foreign Affairs of Finland (MFAF) has been providing GESCI with funding for the African Knowledge Exchange (AKE) in 3 phases from 2012 - 2017. The funding enabled GESCI to pioneer an innovative skills training and enterprise model combining culture and digital media technology, dubbed the 'African Knowledge Exchange (AKE) -Creative Media Venture'. According to the African Economic Outlook (2014) young people (aged 15 and 25) represent more than 60 per cent of the continent's total population and account for 45% of the total labour force. Unlike other developing regions, sub-Saharan Africa's population is becoming more youthful, with youth as a proportion of the total population projected at over 75% by 2015 due to the high fertility rate underlying the demographic momentum. This trend is expected to continue for the next 20 years. It further states that about 50% of the youth population exhibit skills irrelevant to current demand in the labour market, in a situation where educational and skill requirements are increasing, resulting in millions of unemployed and underemployed youth. In such a context vocational training (TVSD) has a very specific role to develop and improve skills related to specific technologies and industries and to equip young people with the skills and capabilities required by the modern work and market place.

According to Deloitte , Africa's population is expected to grow by 80% by the year 2050. This population explosion is going to provide a large market and a pool of youthful human resource that could propel the continent into a world leader in technology - especial mobile based cultural/creative industries. Other sources such as Center for Education Innovation confirms our worst fears about the situation of youth in the sub-Sahara region, in particular rising unemployment among African youth caused by the "...the worrying mismatch between the skills our young people are taught and those needed by the contemporary job market".

Kenya's Vision 2030 outlines key social and economic development targets and recognizes creativity and innovation as a vital ingredient in achieving the overall vision. The Preamble of the Kenyan constitution captures the importance of culture and creativity especially in advancing socio-economic development (Constitution of Kenya, 2010). In spite of all this, Kenya still lacks a sustained and consistent approach or framework towards promoting creativity into a highly profitable industry. . In 2012 a report by a task force set up by the Ministry of Information Communication and Technology (MICT) projected that Kenya's creative industry would by 2017 contribute up to 10% to the country's Gross Domestic Product (Economy of Creativity Working Group, 2016). Whether this was achieved or even surpassed is not clear because of lack of specific and disaggregated timely data on creative industry revenue in Kenya. This notwithstanding, the bold projection in itself is indicative of the great potential the industry has to make a major contribution and transform millions of lives in Kenya.

In the context of growing youth unemployment and the mismatch of skills training for the modern workplace in Africa, the AKE project aimed at developing a more flexible, robust, replicable and scalable skills and enterprise development model to equip African youth with the knowledge and skills for the changing global jobs and employment environment driven by new technologies.

The project focused on the Digital Creative Media (DCM) industry related to Animation, Sound Production and Games and Apps Development. The AKE Creative Media Venture model, built up incrementally over 3 successive phases, demonstrated the viability of well-designed, sharp and focused content, flexible delivery of digital skills development to industry standard, practical entrepreneurial skills and support for start-ups which. It has the potential for replication to other Technical, Vocational and Skills Development (TVSD) sectors and for upscaling to larger groups.

2. Progress towards achieving results



Above: AKE Participant pitches start-up idea to guests during Round Table and Showcase event August, 2016

Achievement of outcomes:

The outcomes identified in the proposal were all achieved, in that:

1) All 20 students recruited and equipped with high end digital skills in Animation, Sound Production and Games and Apps Development meeting industry standards and matched to industry demand and requirements graduated from the project.

2) AKE SKILLS-BIZ innovation framework of products/services/prototypes leading to the creation of 7 start-ups legally set up as small business with lessons learned from start-up experiences. From the Living Lab (LL) research and the experiences from the start-ups emerged the 7-step method and the 7 theses of youth entrepreneurship.

3) Innovative model for digital skills and enterprise development that governments, their agencies and other entities could draw on for youth skilling and enterprise development, replicate to other TVSD sectors and scale up to larger numbers. The model is underpinned and supported by the Living Lab (LL) research and its report with lessons from the training phases and start-up experiences. From the LL research and implementation of the training emerged the 7 Theses of Youth Entrepreneurship, a curriculum framework for the training, skilling, enterprise development and start-up phases, and a Policy Forum with validated policy recommendations for youth digital skills and enterprise development. **(Note: The model, LL research report, curriculum framework, Policy Forum report and policy recommendations are deliverables accompanying the project completion report).**

4) Online platform and portal (<https://gesciakemediaventure.net/>) providing access to vital information and resources in the DCM field, stimulating open innovation and collaboration and peer learning through blogs, sharing of information and the involvement of experts and mentors.

The table below maps the AKE contribution towards achieving the GESCI Results Areas defined in the GESCI RAF 2013 - 2016 (The GESCI RAF is Annex 1).

GESCI RAF Results Area/Outcome	AKE Project Contribution
1. Policies and strategies for inclusive Knowledge Society development	Convened round table, showcases and policy forum events to bring together key stakeholders including government, industry practitioners, experts, entrepreneurs and partners for policy dialogues on youth skills and enterprise development to inform policy formulation. A set of policy recommendations were validated and disseminated and will be used for advocacy during the Ministerial Youth Forum organised by GESCI, AUC and other partners in Rabat, Morocco, in February 2018.
2. ICT integration and reform in formal education	Successful multi-disciplinary team work approaches and integrated nature of learning processes fostering 21st century skills, soft skills and entrepreneurial practice providing lessons that are also relevant for and transferrable to formal education sector.
3. Technical Vocational Skills Development	Tested and consolidated innovative model for youth digital skills and enterprise development in DCM industry in Kenya with potential to replicate to other sectors and industries and to scale up to larger numbers
4. ICT infrastructure and internet deployment	Set up a 21st century learning environment/space with the required digital media infrastructure, tools, equipment and connectivity and the interdisciplinary, team working and integrated co-design and development processes to replicate a modern workplace. Equipped 20 young Kenyans in 2016/17 with industry standard skills and supported them in this space with tutors and industry mentors during the start-up incubation phase
5. Communities of Practice	Active communities of practice of tutors, industry experts, researchers and students learning and sharing. During project period facilitated through Aalto University researchers using a variety of digital tools, including live blogs and live streaming during events. See https://gesciakemediaventure.net
6. Human resource development and training	20 unemployed Kenyan youth equipped with industry standard skills for DCM industries in Animation, Music and Sound Production and Game and Apps Development with 7 start-up companies formed and registered with seed funding obtained. Innovative youth skills and enterprise development model for replication and scale up in other TVSD sectors
7. Management and Information Systems	Developed DCM database of tutors, students, industry partners, course materials
8. Educational portals and training materials	Quality skills development package (curriculum and methodologies) in Animation, Games and Apps Development and Music Production which resulted in students acquiring relevant skills to create/find employment. Students participating in and contributing to CoPs with experts, industry mentors and partners, researchers and fellow practitioners which enhanced their learning

Impact

At the start of the training, skilling and enterprise development students, though carefully selected, had uneven individual knowledge and skills levels and through providing additional support to those not quite on par, the interdisciplinary, practical and integrated nature of the course, all 20 students successfully graduated from the course and reached DCM industry standard level. 7 start-up companies were formed and obtained seed funding and commissioned work. They practiced and mastered business skills and pitching to potential investors and clients which will open up more opportunities for them. The impact of the policy forum has been that government ministries and agencies are more aware of the requirements for digital youth skilling and enterprise development. The tested model can, with some contextualisation and adaptation, be applied to both informal and formal learning environments and other TVSD sectors.

Relevance, effectiveness and efficiency

The project tested and consolidated a model and skills development scenarios that governments and their agencies can draw on in tackling youth unemployment, skilling and enterprise development. The project digital skills and enterprise development model equips young people with the relevant DCM skills to industry standards and the entrepreneurial practice to establish small businesses and/or to find commissioned work in the modern work place. The project was implemented effectively and successfully in that all 20 students selected graduated and 7 start-ups were created, obtained seed funding and with commissioned work. The project demonstrated that well-designed, sharply focused content combined with the right methodologies, supports and the appropriate technologies/tools can provide quality training in much shorter time than normally required in formal TVSD institutions.

Sustainability

The skills and enterprise development model is flexible and can be adapted and applied to the requirements of other TVSD sectors. It is a scalable model and can be used in both formal and informal learning environments. The portal and platform will continue to provide support to the start-ups created and the mentors from the industry are committed to support the start-ups. The policy recommendations emanating from the project will be used at the upcoming Ministerial Youth Forum in November 2017 to raise awareness and advocate for the scaling, replication and extension of the model.

Cross-cutting objectives

The Finnish development policy aims at human development that will increase equal opportunities for everyone to have access to basic services and basic income security. The development policy action plan lists Finland's special priorities as: education, decent work, reducing youth unemployment, and improving the status of women and children.

The project has directly contributed to human development and equal opportunities in equipping unemployed youth with digital skills which have and will enable them to create their own small businesses or find employment. The project targeted young women and out of the 20 students who graduated, 9 were young women who established 3 start-ups.

Through the AKE initiative, GESCI supported the Finnish special priorities in providing further education opportunities, skills development for creation of decent work and reducing youth unemployment and facilitating the participation of women in digital skills development. The project promoted good governance, transparency and openness/open innovation in its daily operations, and sustainable development was given special attention.

3. Assumptions, Risks and Opportunities



The project identified 3 potential risks with their accompanying mitigating factors in the proposal and the project mitigated them in the way described in the proposal (measures put in place by the project are indicated in bold below):

1. How to maintain and fund continuing skills development and upskilling in the DCM sector in a very dynamic and changing environment is a risk not only facing the project but all other TVSD digital skilling and training initiatives. One way of mitigating this is to ensure continuous access to information about new developments and requirements in the field, technology advances, potential partnerships, and events, competitions and sponsorships to encourage on-going skilling. The online portal established will respond to these by providing access to updated information (also on new policies, access to financing, events, internships, sponsorships, etc.), new knowledge in the field as well as new technologies available.
2. The 2nd risk is also associated with funding as access to students to the appropriate industry-standard digital technologies and up-to-date software to meet the content objectives are expensive and with the dynamism in technological development, equipment and technologies could become outdated quite quickly. Partnerships with the industry to provide internships and sponsorships could mitigate. **During the pitching sessions the start-ups were exposed to angel and other investors and students also received mentoring by industry experts which created links between themselves and the industry. The portal mentioned above will also provide information on financing opportunities, sponsorships, competitions, etc.**
3. Well-qualified and expert tutors are not readily available locally, but without their regular and continued inputs the cutting edge and industry standard training cannot be achieved. Partnerships with industry experts and reputable training institutions could mitigate this risk. **In this regard the partnership with the Ballyfermot College of Further and Higher Education proved very successful. The training and curriculum support provided by the Master Tutors from Ballyfermot to the local Kenyan tutors was critical for the success of the project. The partnership with the researchers from Aalto University also provided critical and crucial input to the project success.**



NEW OPPORTUNITIES

Here are opportunities identified so far:

The AKE model and method provide a concrete, robust and tested example of innovative re-thinking of less formal, shorter and more cost effective skills training alternative leading to enterprise development and job creation.

The project implementation also examined in earnest what policies need to be installed in order to support youth in accessing enterprise development opportunities and supports, the labour market and obtaining or creating decent jobs for young people, as envisaged by Sustainable Development Goal #8.

The model emphasises equality of opportunity and promotes fair treatment for women and men in the market and work place, by advocating for gender-sensitive employment policies and workforce skills.

This model can also be replicated with limited tweaking for young people with disabilities. The model is built on and is driven by multi-stakeholder alliances, strategic partnerships and country level action which is key to inclusive growth as required by the 2030 development agenda. This will facilitate the mobilisation of resources for replication and larger scale roll-out.

The AKE model will be showcased and presented at the upcoming Ministerial Youth Forum on Youth Enterprise Development in Rabat, Morocco, in February 2018.

4. Resource allocation

<ul style="list-style-type: none"> • Use of resources: 	<ul style="list-style-type: none"> • See attached Annex 6 for Financial Report.
<ul style="list-style-type: none"> • Short description on major budget reallocations (if applicable) and their reasons (usually corrective measures) 	<p>Reallocated Budget</p> <ul style="list-style-type: none"> - Consultancy budget increased from €61,750 to €71,961 to allow for continuation of the start-up support and Living Lab research to comprehensively consolidate the AKE DCM Model of combined best practices of skills training and enterprise development. - Travel budget reduced from €12,500 to €4,935 - removed international traveling to allow for more use of industry expert input, nurturing and supervision of the start-ups. Workshop budget increased from €15,500 to €20,198: initial budget was envisaged to cover travels for AKE Policy Forum only. With the increased budget GESCI was able to: <ol style="list-style-type: none"> 1. Organize and hold a one- day policy forum conference for local, regional and international partners, government and DCM industry experts. 2. Maintain and strengthen partnerships/ knowledge on key issues related to youth skills and enterprise development 3. Develop recommendations and advocacy for wider uptake and application of the DCM start-up incubation and development process. 4. Work with partners for start-up accelerator 5. Consolidate AKE portfolio into the cultural industries website • Other budget reduced from €48,176 to €35,347, reallocation used to support consultancy work and on Preparatory Activities which included procurement of ICT equipment and studio preparedness for operations (e.g. reliable and fast internet; software that required access to online repositories and resources such as Unity, Toon Boom and Trello.com, ASUS laptops, sound booth and sound recording gear, and renewal of both Animation and Game development software); recruitment of tutors, trainees, Living Lab researchers and the Master tutors. • € 26,142 on Training and Upskilling Tutors
<ul style="list-style-type: none"> • Analysis of the achievements vis-a-vis the use of budgeted resources from all funding sources during the project duration to justify conclusions on efficiency and cost-effectiveness (presented in chapter 2) and Use of TA support 	<p>GESCI required technical, advisory and consultative support from experienced Animation, Gaming and Mobile, Music and Sound Design and Culturally Inspired Music and Sound creation tutors all with high-quality DCM skills and previous work experience in DCM area. All tutors worked in collaboration on ideas development and joint project development in digital creative media. Advice and mentoring from industry experts and experienced entrepreneurs for the processes of prototype, development and start-up formation. Provided support to GESCI staff to implement the AKE Upskilling and Enterprise Development project.</p> <ul style="list-style-type: none"> • €4,012 on Train the Trainer and Enhancement of Curriculum by Master tutors <p>Specifically:</p> <ol style="list-style-type: none"> 1. Work with the AKE tutors of Games and Apps, Music and Sound design and Animation in course module review and update .

	<ol style="list-style-type: none">2. Provide mentorship in relation to the pedagogical skills required to meet the curricular objectives of the modules and help to access current training methodologies3. Against a global perspective, assess and advise students in advancing the design and development of their DCM innovative prototypes/products/services4. Advise as to their potential to meet marketplace requirements and5. Expand the knowledge base in two sets of open innovation processes and goals that will contribute to the final AKE innovation framework:<ol style="list-style-type: none">a. Business/ product innovation-related goals andb. Skills training innovation-related goals. <ul style="list-style-type: none">• € 20,428 in Research-Macro and In depth study and Living Lab support by LL researchersDevelopment of an LL research model consolidation to capture the four features that have been evolving in the AKE model throughout the 2012 - 2017 implementation:<ol style="list-style-type: none">1. A skills-business dual purpose feature2. A co-creation design feature3. A wider ecosystem involvement feature; and4. An implementation feature.
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5. Management and coordination arrangements

The project management and coordination structure consisted of a project team. The members of the project team were:

- GESCI CEO providing overall oversight and TVSD and digital skills development technical expertise
- Director of Programmes as line manager and supervisor providing strategic guidance, technical support and direction
- Finance and Administrative Manager providing budgetary and financial reporting support
- Senior Education Specialist providing pedagogical, methodological, MERL and technical support
- Project Manager managing the day to day activities and attending to general project administration, communication, partnership building.
- Irish Master/expert tutors providing training and curriculum support to the local Kenyan tutors
- Kenyan tutors implementing training of students and supporting the students in their projects, product and prototype development
- Aalto researchers providing Living Lab research support.

The project manager conducted weekly meetings with the tutors and bi-weekly meetings with the Director of Programmes and Senior Education Specialist to discuss progress and challenges, what went well and what did not go well and how to adjust where required.

Monthly reports and quarterly reviews and reports were developed and required action taken.

6. Lessons learnt

The GESCI-AKE programmes over the 3 cycles have from the start combined two aspects: understanding the marketplace but listening to the individual, at the micro-level, for bringing big concepts into the practical pedagogy and training. The 7 lessons learned from the AKE over the 3 cycles are presented as the 7 theses in the Policy Brief (Annex 3).

- A successful training and startup incubation needs to understand the specific marketplace first. The GESCI-AKE approach to innovation in youth entrepreneurship is twofold - markets and individuals - and understanding one's context is thus the foundation of success
- Flexibility is a prerequisite of innovation and training models of youth entrepreneurship. The demand for flexibility comes from both macro-level opportunities in the changing markets and technology, as well as from the individual participants. In other words, **entrepreneurship cannot be cloned.**
- **A holistic approach brings results.** Entrepreneurship requires more than skills and innovation. Students must reflect and critically think about not only their skills and learning more holistically by not only developing practical skills but also attitude to their work and to themselves
- Micro and small business enterprises **must be taught business sense and business practices** and principles must be fostered
- **Communication is key:** before being able to convincingly seek funding, and then manage that funding, an entrepreneur needs to have skills to analyze where the startup is in the market (what it can offer and what specifically it needs), pitch, plan, do accounting, engage in short and long-term planning, etc.
- Digital matters, but so does physical space: Digital tools are attractive as many are open access, and also widely used in professional contexts, and getting familiar with them is important. However, **a physical space is essential for fostering youth entrepreneurship**, especially among young people with limited resources and experience.
- **Find a niche:** The AKE project focused on cultural competencies to provide a coherent and transformative backbone for the GESCI-AKE experience. GESCI-AKE stakeholders recognized that while slow, it is a promising direction with the potential for tremendous growth. Cultural competence has worked well as the framing philosophy of the model and provided conceptual unity for the work of different startups and teams.
- **No success without collaboration:** The GESCI-AKE project and the skills and enterprise development model, rely on supporting a collaborative continuum approach that includes simple and complex forms of partnership. These relationships are created with-in, with the hosting organization (e.g. GESCI) and with external partners (community, industry, educational representatives, etc.) via mentoring and networking partnerships and through follow up actions.
- **Support should continue:** Activities and strategies must be planned to follow up on the trajectories of all those involved in any GESCI-AKE cohort. This facilitates transitions of roles: For instance, previous participants to become mentors or tutors, mentors that might become investors, attendants to an event to become partners (by commissioning work), etc.

RECOMMENDATIONS



Continuity and sustainability are central concepts for a model bringing together the core educational concepts and methodologies to form a continuum throughout the programme process, and beyond: to self-sustaining start-ups.

The model has been tested and consolidated with small cohorts (of up to 20 students) in Kenya and further funding and collaboration from development and industry partners would be needed to replicate and apply it to other TVSD sectors and to scale it up to larger cohorts across more African countries to contribute to alleviating youth unemployment.

The Living Lab research report (2017) states that “sustainability of the start-ups emerging from GESCI-AKE program is a multi-faceted issue that the programme alone cannot solve” and that “the biggest challenge in continuity for start-ups seems to come after the initial incubation and first projects, when first hardships are faced (financial or other challenges).” In this regard national governments and regional and continental bodies need to provide for inclusive policy environments (as proposed by the GESCI-AKE project and model) is a very much needed development to really ensure sustainability.

Continued advocacy and promotion of the model and its potential for replication and larger scale at continental and international forums, such as upcoming Ministerial Forum on Youth and Enterprise Development in Rabat, Morocco, February 2018.

9. ANNEXES

Annex 1: GESCI - Results Framework: Harmonization of Project Outcomes into Organizational Results Framework

GESCI-AKE: Outcomes/ Result Area Harmonization

<p>GESCI Organizational Strategic Objective/ Goal To increase the use and integration of digital technologies in every strand of society to realize higher levels of inclusiveness</p>							
<p>GESCI Intermediate Outcomes/ Results Area 1:</p> <p>Policies & Strategies for KS</p>	<p>GESCI Intermediate Outcomes/ Results Area 2</p> <p>ICT integration and reform in formal education</p>	<p>GESCI Intermediate Outcomes/ Result Area 3:</p> <p>Technical Vocational Skills Development (TVSD);</p>	<p>GESCI Intermediate Outcomes/ Result Area 4:</p> <p>ICT Infrastructure and internet deployment</p>	<p>GESCI Intermediate Outcomes/ Result Area 5:</p> <p>Community of Practice</p>	<p>GESCI Intermediate Outcomes/ Results Area 6</p> <p>Human Resource Development & training</p>	<p>GESCI Intermediate Outcomes/ Result Area 7::</p> <p>Management and Information Systems</p>	<p>GESCI Intermediate Outcomes/ Result Area 8:</p> <p>Education Portals & training materials</p>
<p>AKE Outcome: Improved understanding and capacity of policy makers to develop, review and revise enabling skills development policies for enterprise development</p>	<p>AKE Outcome: Successful multi-disciplinary team work approaches and integrated nature of learning processes fostering 21st century skills, soft skills and entrepreneurial practice providing lessons that are also relevant for and transferrable to formal education sector.</p>	<p>AKE Outcome : - Innovative model and approaches for TVSD and enterprise development, job creation and reduction of youth unemployment</p> <p>-Living Lab SKILLS-BIZ research and MEL</p>	<p>AKE Outcome: 21st century learning environment/ space with the required digital media infrastructure, tools, equipment and connectivity and the interdisciplinary, team working and integrated co-design and development processes to replicate a modern workplace.</p>	<p>AKE Outcome: Partnerships developed for co-creation and wider DCM/TVSD eco-system involvement</p>	<p>AKE Outcome: DCM capacities to industry standard</p>	<p>AKE Outcome: Developed DCM database of tutors, students, industry partners, course materials</p>	<p>AKE Outcome: Africa wide DCM portal that will provide a one-stop point of access to information and knowledge sharing to DCM industry</p>

<p>AKE Output : - Policy Forum and policy recommendations for wider uptake and application of DCM skills and enterprise development model</p> <p>- Strengthened knowledge partnerships on key issues related to youth skills and enterprise development</p>		<p>AKE Output : - Integrated and innovative curriculum package for DCM skills development to industry standard</p> <p>- Media and technology opportunities for internships, apprenticeships, enterprise development and employment</p> <p>- Living Lab SKILLS-BIZ innovation research and MEL to test and demonstrate viable start-up process</p> <p>- AKE Innovation Framework - 7 step method</p>		<p>AKE Output: Knowledge creation and sharing with partners and multi-stakeholders, e.g. private sector, relevant government departments/agencies and training institutions</p>	<p>AKE Output: - Equipped 20 young Kenyans in 2016/17 with industry standard skills and supported them in the studio space with tutors and industry mentors during the start-up incubation phase</p> <p>- Built higher level of capacities of local tutors</p> <p>- Better awareness and understanding built among policy makers of needs and requirements of youth digital skilling and enterprise development</p>	<p>AKE Output: An online portal facilitating continuous information collection, flow, dissemination and collaboration for the DCM industry stakeholders and communities</p>
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Annex 2: AKE Main Activity Report 2016-17



AKE 2016/17 students work on assignments at the GESCI Media Lab in Nairobi, Kenya.

GESCI invested in state of the art hardware and software, secured a training space and hosted and facilitated the creative media training and provided the overall programme management, course design and course delivery mechanisms. Also, the organization provided technical and strategic advice to partners, provided quality assurance, conducted monitoring and evaluative research, and documented a model for further refinement and eventual wider replication.

GESCI through AKE Creative Media Venture 2016-2017 implemented the following main activities:

GESCI through AKE Creative Media Venture 2016-2017 implemented the following main activities:

Preparatory work

The objective of this activity was to define the scope of work and how the project would determine success and the kind of outputs to be achieved from the main activities. During this process the project foundation for implementation was laid and required resources gathered. It included a carefully designed recruiting schedule and setting up of infrastructure.

Three key activities were essential:

a) Procurement of ICT equipment and office preparedness for operations

For this project's success procurement of fast, steady and abundant internet was mandatory. The project heavily depended on software that required access to online repositories and resources such as Unity, Toon Boom and Trello.com. Some of the procured ICT equipment and software were ASUS laptops, a sound booth and the sound recording gear, and renewal of both Animation and Game development software.

b) Recruitment of tutors , participants, Living Lab researchers and the Master tutors

The project activities commenced with recruiting Tutors (Animation, Music and Sound and Games and Mobile Apps tutors) based on the identified terms of reference that had been developed after a training needs analysis. The successful tutors were organised into a selection committee to recruit suitable participants. Important elements of the selection process was to: 1) test soft skills and pick young people who had creative ideas and a portfolio to share; 2) identify 'rookies' with intense interest in improving their skillsets; 3) identify individuals already learning or using the Animation, Music and Sound or Games and Mobiles apps software in one way or another. GESCI's AKE Creative Media Venture project would then build on that raw foundation to upskill them, capacitate and facilitate product and prototype development and foster entrepreneurial mindsets and practice and support for start-ups.

c) Identification of industry experts, partners, business investors and mentors

The project team identified industry experts, partners and start-up business investors. The identification process was anchored in Terms of Reference developed based on the project needs analysis. The project team scouted and mapped the DCM community for potential partners. The identified partners were then involved in discussions that resulted into agreements signed between the identified partners and GESCI. These partners inter alia participated in the Solution Design Workshop, mentoring activities, student showcasing, pitching event and Policy Forum.

Project implementation



Members of the Boisich Start-Up receive seed-funding from GESCI

The main activities focused on:

2.1. Research - Macro and in-depth study and Living Lab support

GESCI employed an action research and MEL (Monitoring, Evaluation and Learning) approach to accompany and track implementation and inform on-going adjustment and consolidation of the model. The action research dubbed the “Living lab Skills-Business innovation research” was to test and demonstrate viable start-up processes and to document a replicable AKE innovation model resulting from the entire process. The AKE project sought the support of two living lab researchers associated with the Aalto University Media Lab, Finland.

The overall aim of the LL research in the AKE- ‘Creative Media Venture ‘project was to examine how the innovative practices in the project could be consolidated and enhanced through the Living Lab intervention linking training and Digital Creative Media industry processes in Kenya, to produce innovative products and to improve skills development for entrepreneurship and innovation among secondary and pre-tertiary youth.

The specific aims were to:

1. Enable students to accelerate the design and development of DCM innovative prototypes/products/services that are commercially viable and responsive to real and emerging markets, cultural and social needs; and
2. Expand the knowledge base in two sets of open innovation processes and goals that contributed to the final AKE innovation framework:
 - a. Business/ product innovation-related goals and
 - b. Skills training innovation-related goals.

The researchers carried out research and identified methodologies related to the AKE- ‘Creative Media Venture’. Specifically, they developed a LL research model consolidation that captured the four features that have been evolving in the model throughout the 2012 - 2017 implementation phases:

1. A skills-business dual purpose feature
2. A co-creation design feature
3. A wider ecosystem involvement feature; and
4. An implementation feature.

Outputs of the LL research were:

- 1) Consolidated LL research framework and methodology for AKE- ‘Creative Media Venture ‘ programme that captured the final evolution of the AKE technology enhanced learning model linking skills training and DCM industry stakeholders and communities.
- 2) LL research platform/ portal (see <https://gesciakemediaventure.net>) that included skills training and business community inputs, processes of prototype and product design and development, national, regional and international experts inputs, state of the art research on DCM industry and markets.

- 3) Multi-stakeholder multi-level dialogue at the end of the project .
- 4) Analyzed collected data and monitored innovative practice over the 3 cycles of implementation and producing research reports following criteria identified in the LL research and innovation framework.
- 5) Conclusions drawn from the LL research and innovation, its contribution to the LL field in general and the emerging field (Upskill training and Enterprise development) in particular - along with recommendations for applying the model in education (TVSD) and business (DCM) world domains.
- 6) Repackaged LL research and innovation findings to Creative Media Venture and other relevant audiences following their specific needs and interests and
- 7) Policy briefs that informed the next phases of the Africa Knowledge Exchange project policy forums and dialogues.

2.2. Train the trainer and curriculum enhancement

Training of Trainers and curriculum enhancement was a joint exercise for review of the five elements of the AKE -Creative Media Venture training programme between local Kenyan tutors, the Irish Master tutors from the BCFE College, GESCI staff and the participants. The five elements comprising the training model were: - Learning Environment, Learning itself, Teaching, Community of Experts involvement and Project management. These translated into:

1. An adequate, safe learning environment (infrastructure and facilities, accessibilities)
2. Participants learning in an effective and joyful way (relevant knowledge, skills and attitudes)
3. Qualified teachers teaching effectively, with high commitment (knowledge, skills and attitudes)
4. Capable lab/studio management, with vision, monitoring capacities and maintaining good relationships with partners, communities and other stakeholders.
5. Industry expert involvement in governance of the project (and not incidentally , when work has been done)

The overall aim of the Training of Trainers (TOT) and curriculum enhancement in the AKE 'Creative Media-Venture' project was to provide a strategy for a combined implementation of co-working spaces, co-creation with community and customer engagement and to fully integrate entrepreneurialism not in theory but in practice in the training scenarios to facilitate start-up creation.

The team was able to produce the following outputs from the TOT and curriculum enhancement activity:

1. Games and Apps, Music and Sound design and Animation course module review and update;
2. The master tutors provided mentorship in relation to the pedagogical and tutoring skills required to meet the curricular objectives of the modules and helped to access current training methodologies;
3. The master tutors against a global perspective, assessed and advised students in advancing the design and development of their DCM innovative prototypes/products/services to industry standards;
4. The team reviewed the curriculum in place and its relevance and ability vis a vis the current and emerging digital media marketplace;
5. Led by the master tutors, the team examined, evaluated and advised on the quality and potential of students' existing projects, completed or in production, to meet commercial standards; and
6. The master tutors assisted in the development of an Innovative Enterprise development programme consolidation as per the AKE Creative Media Venture' to capture the four features that have been evolving in the model throughout the 2012 - 2017 implementation phases.

2.3. Roundtable and Solution Design for prototyping and product and service development

The objective of this activity was to design and implement a programme/action plan to enhance the business knowledge of the students of art, Digital Creative Media i.e. individuals who have potential to be (self) employed in the creative industries after graduation/dropping out of school. Special focus in the roundtable was given to both review of the already developed prototypes and latent entrepreneurial propensity i.e. personal qualities and skills of the individual that would enable students/participants to pursue an entrepreneurial career in the Digital Creative Media sector when given the opportunity or incentive to new venture creation.

29 representatives from Digital Creative Media industry companies participated in the AKE Creative Media Venture roundtable and solution design workshop to share experiences and knowledge on how they had been able to make Art and Commerce thrive in their own businesses. It was a mix of companies made up of commercial economy companies and sharing economy companies. Commercial companies build value with money at their core. Sharing economies build value and tend not to privilege money - both of these economies are critical to making Art and commerce thrive in the DCM industry.

The outcome of the workshop was an action plan developed jointly with the representatives from the industry and was implemented from September to December 2016. This action plan became the official curriculum for the Entrepreneurial Practice phase and provided a rich ground for apprenticeship for the AKE participants offered by

the industry experts. The participants were exposed to experimental ventures and provided with commissioned work for joint production in teams of both students and the industry experts. In this regard 50 experts provided guidance, mentoring, enterprise development, commissioning of work and acted as guest tutors.

One way of looking at the success of job placement and entrepreneurial programmes is to assess the level of involvement of employers, job-market intelligence gathered with the help of the industry experts, involvement of industry experts in mentorship and on-going curriculum support by both tertiary institutions and the private companies that are likely to engage the students post training.

The AKE Creative Media Venture involved experts in the three phases of its DCM programme:

- 10 industry experts were involved in phase one (Training and Upskilling). Emphasis was placed on intellectual property knowledge awareness and access to refresher training on the three key courses offered by AKE-Creative Media Venture.
- 29 Digital Creative Media companies were involved (through their representatives) in the second phase (Entrepreneurial Practice) in both programme design and delivery during and after the round table and solution design workshop. The Entrepreneurial Practice phase was a lab based simulation of real working office environment and the focus of engaging these 29 companies was to allow participants access to commissioned work and chance for joint production with these companies.
- In the third phase 15 business experts made up of Angel investors, financial experts and practicing start-up entrepreneurs were involved in the sharpening of the skills of the founders of the 7 new AKE-Creative Media Venture start-ups.

2.4 Training and Skilling

The overall aim of the training and skilling in the AKE- 'Creative Media Venture' project was to practically implement and apply the innovative practices through 'A Creative Media Venture Living Lab' intervention linking training and Digital Creative Media industry processes in Kenya, to produce innovative products and to improve skills development for entrepreneurship and innovation among secondary and pre-tertiary youth.

The specific aims were to:

- 1) Allow students to design and develop DCM innovative prototypes/products/services that were commercially viable and responsive to real and emerging markets, cultural and social needs; and
- 2) Implement two open innovation processes and goals that contributed to the final AKE innovation framework via a) business/ product innovation-related goals and, b) skills training innovation-related goals.

The training and skilling carried out followed a structured curriculum framework and identified methodologies related to the AKE- 'Creative Media Venture' pedagogy and training approach of inter disciplinary, co-creation and collaborative methods of learning that resulted into the 7 steps model of job creation. Additionally, the training and skilling methodologies allowed for collaboration with industry experts and business advisors/mentors validating the final LL research model consolidation that captured the four features that have been evolving in the model throughout the 2012 - 2017 implementation phases.

Training and Skilling provided tangible evidence, products, prototypes and artifacts. It allowed for practical implementation of co-design of user ideas, development of prototypes, and building up of start-ups for marketing products. It also allowed for engagement of the LL research communities involving researchers and multi-stakeholders of tutors, student participants, DCM industry partners, and policy makers.

The training and upskilling was sequenced into three phases

- *Training and upskilling phase*
- *Entrepreneurial practice phase*
- *Start-up development phase*

LEVEL 1: TRAINING AND UPSKILLING PHASE

This involved refresher training and a three month course on three modules of *Animation, Music and Sound production, Games and Mobile Apps development*.

The Animation modules introduced the students to basic principles of 2D animation. Through practical, artistic and technical application, the students learned core principles of animation such as volume, timing, squash and stretch, arcs/path of action, anticipation, action, reaction, gravity and balance. The participants then learned integrated drawing principles such as two and four legged locomotion, flipping and rolling techniques, form, structure, model, and clarity, shape and finally character design. The students were taken through and experienced the entire pipeline.

Music and Sound design is rather complex. For instance professional composers draw on digital music technologies for the production of their work. Exemplifying a broad skills set, from traditional musicianship skills such as instrumental facility, aural skills and fluency in music notation, the contemporary music artist is also experienced in sound recording techniques and possesses expertise in software based production environments for writing and arranging music. In order for the students to acquire such skills four interrelated areas central to music production, composition and the digital arts interaction with music together formed the basis of the student's learning:

1. Language of music: - The students learned rhythm, pitch, chords/ harmony and instrumentation.
2. Audio recording and editing: - The participants acquired core skills in Sound (frequency, amplitude, loudness and timbre), microphones, the mixing console, recording and editing.
3. Music production: - The participants learned Apple Mac general computer usage, Musescore (music notation), logic, Garage band and Audacity. They also learned MIDI (Musical Instrument Digital Interface), Production (Tempo, Mixing-panning, EQ, Effects, dynamics and mixing Automation) and Mastering.
4. Music composition: - The participants were guided regarding elements of music composition such as form, musical style and mood, and in developing basic ideas to fully fledged compositions. A brief history of major musical styles contextualized the role of the composer for the students and presented possibilities for future listening and study. The students were taught Musical form (Blues, binary form, popular song form and extended forms) Musical Styles (classical, jazz, popular, dance, folk, and world music) loop based music (Ostinato, drum loops, and bass lines), Song writing, traditional story-telling, synching music and narration and finally project realization (strategies from finishing music projects, inspiration and perspiration)

Games and Mobile Apps design and development: this module introduced the participants to basic principles and techniques of video games design through a series of exercises. It enabled students to devise, create and achieve theoretical basis for the design and structure of a series of game-play exercises. Through practical, artistic and technical application, the student demonstrated basic understanding of skills, techniques and principles of games mechanics design and interface development. Part 2 of the module introduced the students to the basics of audio-visual assets creation. It enabled the students to devise and create a vertical slice of a game prototype. The students were also introduced to industry standard production software and how to use this software in production of video game prototypes. The students demonstrated understanding of the skills and techniques of assets production and level design.

Culturally Inspired Music and Sound production course: This module was cross cutting and applicable to all modules (Animation, Games and Mobile Apps and Music and Sound design). This theme was included to foster work in creative pre-production teams, and co-creation on tutor supported, project based work. The participants received foundation training in exploring Kenyan folk music and its relevance to artistic work through song writing and performance. Students were exposed to story-telling through music and the exploration of traditional themes through the writing of lyrics, melody and scripts. Students were introduced to the incorporation of new and traditional Kenyan/African instruments in their productions and were encouraged to explore music performance in various entertainment and cultural environments.

The participants were taught: - Fusion, hip-hop and Kenyan traditional music; the pentatonic; authenticity in music and sound; song writing and song structure; managing and recording with modern and traditional instruments; synching music and narration. Participants were challenged to look at comparative aspects of music giving the example of slums and different styles of music that have emerged from there to capture youth aspirations and influence of rural popular music in the city and the comparison to urban folk music. They were further guided in the art of storytelling and writing in music and the writing skills and techniques in song structure in regard to recording and production and how the traditional techniques of African chants and song influences modern music.

On the 24th of June 2016 the AKE project had a fruitful end of phase1 showcase held at the AKE media lab. A total of 20 students graduated and received overwhelming support from their peers, AKE alumni, industry experts and GESCI staff. The showcase was broadcasted live through Skype video and was followed live as far as Helsinki and New York. All the students pulled together to make the '**Sponsa**' as the main project. Sponsa is a mini TV series broadcasting 2 episodes. The Sponsa animation showcased revealed that the animation skills had not reached the desired level and the AKE Alumni offered to help polishing the final copy of the trailer. **The story of a 'Sponsa' was not only told through animation but was also played through a mobile app called 'Sponsa'**. This app provided mobile users with a chance to play the Sponsa game. All the voice-overs and sound for this particular project were recorded at the AKE's Music and Sound studio by the Music and Sound students.

For the individual projects, Music students recorded four tracks for the 'Dreamer' album that was compiled to 10 tracks. The games course had showcased four games: Football penalty shootout game, Bowling, Golf and Rounders (later on redeveloped to racing cars). At least all the four games had up to level two of playing and they remained work in progress. The animation class had made a couple of advertisements for fictitious clients.

Students graduated from the training and upskilling phase one of the project with:

- A portfolio which demonstrate their skills and talents in visual and digital media
- Experience working in a creative team environment which explores innovative ideas and applications of visual and digital media at a pre-production level.
- Linkages with creative entrepreneurial actors and networks
- An understanding of the digital media and culture interface and the possibilities this offers for new applications, processes and products.

Table 1 below provides a summary of the modules for the Upskilling and Training curriculum - AKE Creative Media Venture level one.

Table 1: Module outline for Upskilling and Training curriculum phase - AKE Creative Media Venture level one

Curriculum Up-skilling and Training Phase: Modular Framework			
Animation	Games & Mobile Apps	Music, Sound Creation & Production	Culturally Inspired Music & Sound
Essential Skills	Essential Skills	Essential Skills	Essential Skills
01: Introduction and Induction	01: Introduction and Induction	01: Introduction and Induction	01: Introduction and Induction
02: Principles of Animation	02: Physics Engine	02: Drum, Base and live recording	02: Fusion, Hip hop & Kenyan traditional music
03: Animation pipeline	03: Assets and Scene Set-up	03: Production and Recording techniques	03: The pentatonic and authenticity in music & sound
Project : Short animated Sequence	Project: Short Game & Mobile App Sequence	Project: Scores and Sound for Animation & Game	Project: Folk music, writing & Art of Story telling
04: Animation Software mastery	04: Game Software mastery: Programming C#	04: Music Software mastery: Logic Pro	04: African Drum, rhythm and Assorted traditional instruments
05: Pre- Production testing	05: Pre- Production testing	05: Pre- Production testing	05: Pre- Production testing
06: Concept Development	06: Concept Development	06: Concept Development	06: Concept Development
07: Styling and Pre-production process	07: Character assembly & user interactions	07: Recording, Scoring, Follies and mastering	07: Synching music & narration/poetry/Spoken word
08: Concept finalization	08: Concept finalization	08: Concept finalization	08: Concept finalization
09: Project Production	09: Project Production	09: Project Production	09: Project Production
10: Post production	10: Post production	10: Post production	10: Post production
11: Project Finalization and consolidation	11: Project Finalization and consolidation	11: Project Finalization and consolidation	11: Project Finalization and consolidation
12: Showcase : ' A short Animated Sequence'	12: Showcase : ' A short Game Sequence'	12: Showcase : ' A short Game/Animation Sequence with quality sound'	12: Showcase : ' A short Game/Animation Sequence with rich cultural integration'

LEVEL 2: ENTREPRENEURIAL PRACTICE

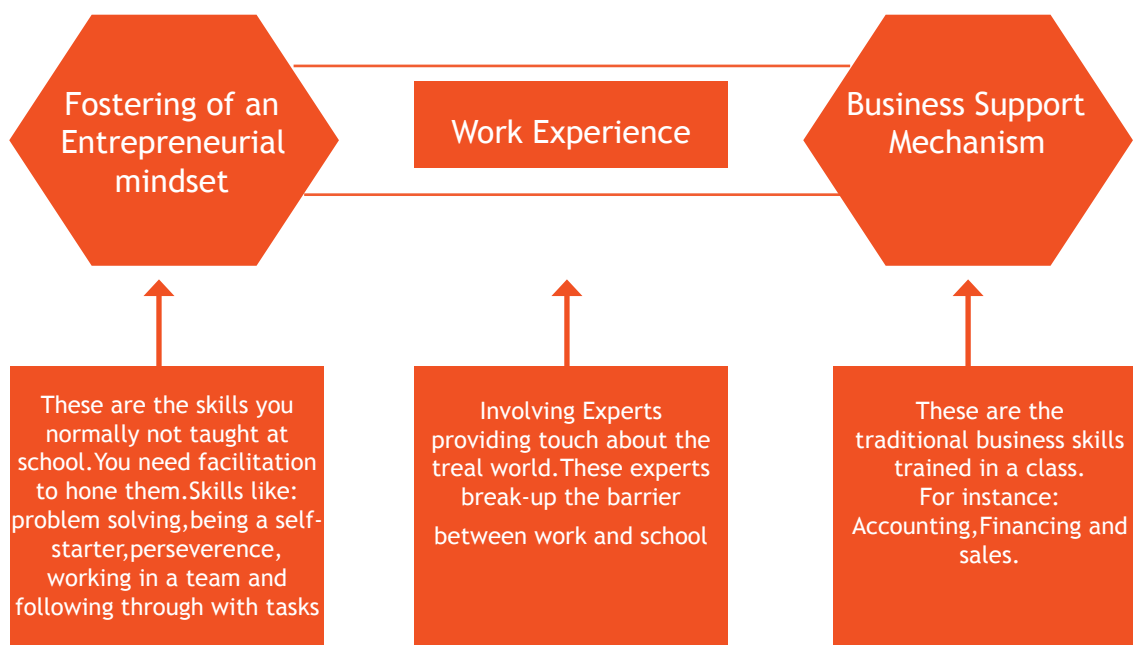
Entrepreneurial Practice was a 4 months course with a lab based simulation of a real working office environment. The trainees experienced team-work and collaborative project design and development to simulate real-world employment environments and market place standards. An all-inclusive Innovative Enterprise Development Programme for the prototype and enterprise development with a combined approach for implementation of co-working space, co-creation, customer and community engagement was implemented. Students had access to the full range of digital media equipment, software and tools in GESCI's digital media production studio. A guide for managing creative spaces and innovative projects that provide step by step processes of formation of a number of start-ups with already - commissioned project work as well as allow provision of professional advice and external monitoring on the processes of start-up formation was utilised. Students were guided to identify, select, develop and deliver multi-media projects which had promising commercial potential, i.e. projects whose potential could be replicated in the market place.

Consultancy, advice and inclusion of external mentoring on start-up formation, project prototypes and overall project development was delivered to students. This broadened the scope of job creation by having more people creating jobs instead of looking for jobs. The goal was to encourage development of safe-spaces for development of new companies and to find nuggets of success stories to draw inspiration from and to act as a reference point for building profitable businesses for increased income.

Entrepreneurial practice was guided by three important elements as depicted in figure 1 below:

1. Fostering Entrepreneurial mindset
2. Apprenticeship
3. Business support

Fig. 1: Fostering an entrepreneurial mindset



Fostering an Entrepreneurial mind set (also known as behavioural approach to entrepreneurship): this module introduced the participants to soft skills necessary for entrepreneurial success. These are highly valued work and life transferable skills, also referred to as soft skills, employability skills, life-skills or 21st century skills. Industry experts attending the GESCI roundtable and solution design workshop recommended replacing theoretically based and knowledge based curricula with an integrated competency based curriculum. A competency based curriculum emphasizes the need for participants to acquire competencies, to be active in class and to train in both technical skills and transferable skills.

GESCI adopted flexible ways of fostering an entrepreneurial mind set where tutors were allowed to use a mix of methods such as role plays in class, skits, deductive methods, roundtables, debates, presentations, games and songs, group work, field research and excursions, meetings and feedback sessions, brainstorming, brief taking, blogging and photography, case studies, speaking walls, lecture methods, exchange and learning co-creation and co-design.

The involvement of local entrepreneurs as advisors, mentors, speakers, and jury members for participant's presentations was an excellent and successful option. The input of the industrial and business partners in the development and implementation of the AKE-Creative Media Venture study modules and course projects was essential.

Work Experience (Apprenticeship): - This module made it mandatory for each participant either as an individual or in a group to pair up with an industry expert for both mentorship and guidance. These experts broke down the barriers between work and learning as they provided a touch of the real world. Through work experience participants accessed experimental ventures, start-up-ideas and received commissioned work and joint production opportunities from the industry experts.

The primary role of creative industry experts was to act as advisors and commentators to the team delivering the modules and the course projects. They helped the team in facilitating the entrepreneurial processes offering feedback on the design, delivery and appraisal of teaching, learning process and prototypes developed. In this particular case both the industry experts and participants jointly worked on a single project called “**Hera of Nangwe**”.

Business support: - This module essentially accelerated the awakening of the latent business potential in the participants. The primary role of business experts in this activity was to act as role models and mentors to participating youthful artists, particularly in the participants’ generation and development of initial business ideas. The industry specific and tacit knowledge of the mentors helped participants in their development of commercially viable business concepts that would later transit into start-ups.

Transitional co-operation and alliances between creative industry experts and business mentors were encouraged to enhance sharing and exploitation of effective practices and approaches.

Mentoring activities

Formation of review panels: - a panel of creative industry experts, business mentors and the local tutors was convened to meet before, during and after the study modules to consider and discuss approaches to the panel’s planning, content and delivery, giving feedback on content and processes. This was particularly achieved during the break- out sessions during the roundtable and solution design workshop where each group of experts related to animation, games and mobile apps development or music and sound design were grouped and asked to come up with an actionable work plan. The resultant work plan was adopted as the curriculum for the entrepreneurial practice phase.

On the 6th December 2016, GESCI held a start-up launch and projects showcase. This was the forum that the panels used to showcase the final products developed jointly with the participants.

Table 2 below provides the modular outline for the Entrepreneurial Practice phase.

Table 2: Module outline for Entrepreneurial Practice Phase - AKE Creative Media Venture level two

Curriculum Entrepreneurial practice Phase: Modular Framework			
Industry Expert involvement	Business Support	Personal Entrepreneur Competencies	AKE Main thematic Project
Apprenticeship	Lessons	Class project (tested and scored based on team work, skits, class projects)	Main Project : Hera of Nangwe/ Child Soldier/ Sound of the City
01: Prototype development	01: Market Place: Case studies	01: Opportunity seeking ; Information seeking	01: Concept development
02: Training of Trainers (TOT) & Curriculum Enhancement	02: R&D for business	02: Demand for Efficiency and Quality	02: Research
03: Round table and Solution Design	03: Business Models	03: Goal setting	03: Ideation
04: Implement: Roundtable Action plan	04: Business plan development	04: Fulfilling commitments (deliver the project at all costs)	04: Making
04: Implement: Roundtable Action plan	05: Developing business culture	05: Persistence	05: Testing
04: Implement: Roundtable Action plan	06: Go-To- market strategy	06: Taking calculated risks	06: Maintenance
07: Closing " Showcase"	07: Closing " Showcase"	07: Self Confidence	07: Closing " Showcase"

Participation in networking and lab events: - Both creative industry experts and business mentors were engaged in relevant developmental study lab module activities (module networking events and open innovation labs) contributing their expertise and knowledge in order to help enrich developmental module processes.

Input into teaching and learning activities: - Both creative industry experts and business mentors were engaged in module sessions sharing their experiences and insights regarding creative businesses with participants through talks and discussions, particularly in ideas generation and development of viable businesses.

Prototyping Activities

This was the first module of the Entrepreneurial practice phase. This phase was organized such that the first month of the phase was dominated by prototyping and the rest of the 3 months collaboration with creative industry experts and business mentors in product/service development. Prototyping involved use of techniques and strategies that would lead into time saving and management during the product or service development. It meant gathering all the required day to day resources that would lead to successful delivery of the project into a common basket (database) that was easily accessible and re-usable. During the prototyping phase, the participants developed all the repositories of hands, faces and other moveable joints that were already rigged into 360 and 45 degrees, side and front shots. By having these essential parts ready, the work load was reduced by half.

Joint project

During this phase students were expected to work on a joint project. “Hera of Nangwe” was the common project for the enterprise practice phase and it is a story about a super heroine “Hera” (Hera meaning love in Luo community) who saves the Nangwe community from the yoke of poverty and the consequences of poverty.

The story comes from the fact that Kenya has many male/ heroes like Luanda Magere (Luo Hero), Nabongo Mumia (Luhya Hero), Syokimau (Kamba Hero), Gor Mahia (Luo Hero), Leibon (Maasai Hero), Mekatilili wa Menza (From the coastal region) and almost no female heroines. Hera is a symbol of women and the important role women play in the community/society. It is a short film fitting in the mythical fantasy genre presented in December 2nd at the end of the project. The story was featured in a film version (Hera of Nangwe Animation) and a computer game version (Hera of Nangwe App). View these projects here:

<http://gesci.org/our-work/technical-vocational-skills-development/vsd-digital-skills-and-youth-entrepreneurship/african-knowledge-exchange-2016/>

“Hera of Nangwe” draws parallel with “The Chronicles of Narnia: The Lion, the Witch and the Wardrobe (2005)”, “The Shannara Chronicles”, “Moana”, and “Guardians of the Galaxy”.

Other sources of references for inspiration were games and online animations such as Black dynamite, Boob Docks, Rick and Marty, Brickle Berry, XYZ, Total Drama Island.

The Irish Master tutors from the Ballyfermot College of Further Education (BCFE) proposed a multi-method approach for the enterprise development phase of AKE as described below:

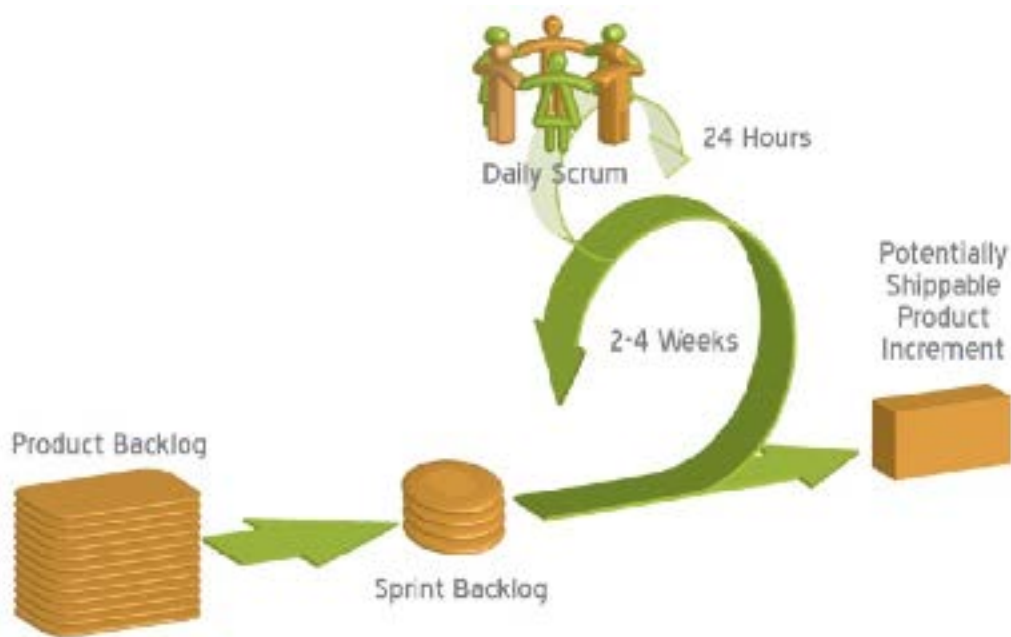
Multi-Method Approach

This approach is comprised of:

- Use of Scrum meeting and Trello online project management software
- The AKE 7 steps method of commercial project development
- Behavioural Approach to Entrepreneurship

Scrum methodology (see figure 2) is an effective way of involving the product owner throughout the product development instead of involving him/her at the end of the project when the product is completed with no possibility of making changes or corrections. It is mostly used by software development techies. It involves constituting a scrum team that is made up of target group, project team, product owner, environment, related partners, and target community/ companies/organizations.

Figure 2: Scrum framework (<http://www.mcpa.biz/2014/02/using-scrum-kanban-safe-dsdm-dad/>) (<https://www.scrumalliance.org/why-scrum>)



It was suggested that since the AKE lab would be used to simulate an office environment, the participants would be engaged in weekly scrum meetings called “Status update meetings” internally.

The whole project was managed through Trello.com and as presented by the Irish master tutors in the Trello Action plan document.

The AKE 7 steps method of commercial project development

The 7 steps method was proposed as a model for project execution. It was believed that the students would use it to develop pitch decks for pitching for opportunities and to network in the industry for projects to be implemented in the AKE lab. The 7 steps are:

1. **Motivation** - participants had to find what motivates potential clients to have the project implemented such as the need to solve a social issue. They also found out what motivated them to implement such a project i.e. money
2. **Contextual research** - The AKE participants proceeded to conduct research on the subject matter and the project. This involved knowing as much as possible on the subject matter.
3. **Ideation** - The AKE participants then convened a Scrum team. The scrum team must have all the necessary stakeholders involved.
4. **Planning** - the stakeholders then met to plan and discuss the prototypes to be developed.
5. **Creating** - Project production started after approval of the prototypes.
6. **Control (monitoring)** - On going monitoring and evaluation was conducted bi-weekly through the scrum meetings
7. **Closing** - Handing over of the project to the product owner.

Fig. 3 below provides a summary of the 7-step method

Fig. 3: The 7-step method



Behavioural approach to entrepreneurship

This relates to the business ethos the AKE was encouraged to foster in the AKE trainees as budding entrepreneurs. These competencies were fostered throughout the AKE enterprise practice and start-up development phase.

LEVEL 3: START-UP DEVELOPMENT

The aim of the 4 month' phase was to accelerate and unlock significant growth in the start-up businesses. GESCI took the newly formed companies into an incubation and start-up accelerator programme. The organization then connected these newly formed start-ups with local, regional and international investors. GESCI brought in experts with high expertise of building and growing companies. The processes of incubation and start-up growth acceleration were documented through the Living Lab research, and the findings were shared with policy makers and the creative industry communities.

Each start-up was intended to solve a particular problem and had a unique path to pursue in the market. The goal was to set the company on the right course and help with early navigation through assistance of local team of tutors, experienced speakers, creative industry experts and designated mentors.

Programme and methodology

The programme consisted of a 20-days' boot camp and then subsequently 3-days workshops every week for the next two months where the foundation was established and students were equipped with tools to diagnose their businesses and devise strategies to optimize business in all conceivable areas.

After each workshop, participants worked in-company with the assistance of their mentor, growth catalyst, financial modeler and sages to implement their new strategies and innovations - boosting their growth trajectory in significant ways. Following workshop capacity building sessions with mentors, participants received field based assignments through field exposure visits and engagements with the industry employers. Workshops were held twice every week on Tuesdays and Thursdays, providing participants with time to apply what they learned. They then planned and prepared for the next workshop, and kept their focus on developing their businesses.

Seven business start-ups -see figure 4 below - (Artari Kreations, Tripple Touch, and Crystal Quad (Later renamed to Boisch), Pamoja gamers (Later renamed to Ionic Code Software developers), Makossiri Entertainment, KIWO films and Verb House productions were launched in December 2016. These start-ups were admitted into an incubation programme of three months beginning January to end of March 2017. As a motivation, they stood a chance of winning Euro € 2,143 seed funding per start-up during the incubation period.

Fig 4: AKE Start-ups 2017.



In the incubation phase of the programme, start-up cohorts were guided and mentored by industry/media experts and business practitioners. They were advised on the media products and services in demand. Further they were assisted and advised on the creation of prototypes and worked with marketing agencies/companies for service based jobs and commissioned work. Please see appendices for a detailed summary of each start-up.

In-House pitching for Angel Investors Activities

The project hosted an in-house pitch for the start-ups. Together with this pitch an online entry form made up a baseline survey for the 7 start-ups. This was a baseline survey on the expertise of the individuals making up individual start-ups in the cohort, employability of the products and prototypes and identified up-skilling needs.

This information was crucial for input in start-up course development, course design, and identification of market trends, industry constraints and existing best practices.

Table 3 below provides the module outline for the start-up phase

Table 3: Module outline Start-up Establishment Phase - AKE Creative Media Venture level three

Curriculum Start-up Establishment: Modular Framework			
Start-up Establishment	Boot-Camp	Workshop	Client work
Start-up Anatomy	Lessons by Sages, Financial modelers and sages, business emeritus, Investors (Angel and Seed)	Class project	Incubation
Step 1: Getting Started	01: Defining and owning the product road map (includes refining existing features, development of new user stories and capabilities, customization based on user requirements)	01: Opportunity seeking ; Information seeking	01: Concept development
Step 2: Register your business	02: Build Governance and Management team in each start-up	02: Demand for Efficiency and Quality	02: Research
Step 3: Become operational checklist	03: Improve on Go-To-Market Strategy (includes Sales/ Pricing strategy, contract development, branding approvals, Marketing Approvals)	03: Goal setting	03: Ideation
Step 4: Launch your Business	04: Managing financials and operational performance	04: Fulfilling commitments (deliver the project at all costs)	04: Making
Step 5: boot camp	05: Signing up of customers and Clients	05: Persistence	05: Testing
Step 6: Workshop	06: Define and drive operational support strategy	06: Taking calculated risks	06: Maintenance
Step 7: Pitching	07: Pitching	07: Pitching	07: Closing " Pitching and Support"

POLICY FORUM

The goal of the policy forum was to discuss the critical link between skills development/ learning, innovation, entrepreneurship and enterprise development and how a supportive policy environment is a requirement for national digitally-driven skills development. With special focus on discussions about the current level of innovation and youth enterprise development efforts, as well as how they could be further developed and supported by supportive policies in Africa.

The aims of the policy forum were to: -

- 1) share the finding from AKE Living Lab research and innovation activities
- 2) Showcase the AKE model of enterprise development
- 3) share the lessons learnt from the 7 start-ups and incubation of the same
- 4) provide a forum for stakeholders to share their knowledge and experiences in regards to innovation, youth enterprise development and the policy environment in the region.

The achieved outcomes were increased awareness in regards to the existing skills levels, innovation ecosystem, youth enterprise development and policy environment. Plenary discussion was replete with discussion about areas in need of attention and development in the Education and industry policy arenas. The forum was summed up with a critique and evaluation of the AKE model of the digital skills and enterprise model.

The policy forum presented a unique opportunity for a meeting point between policy makers, DCM practitioners/ students and the business world. This was effectively captured in the presentations by Senior Youth Advisor, Directorate of Human Resources Science and Technology, African Union Commission representative Nicholas Ouma: The role of skills development in the innovation ecosystem ;and the presentation by the managing partner at Chanzo Capital, an Angel Investor and developer of new businesses Eric Osiakwan : The role of investors in development and innovation of African technology and digital start-ups with special reference to capital raising - both debt, equity, and private placement for micro-funding.

Challenges and issues

The environment in the creative industry is full of potential but the economy, resources and general populace take time to welcome new developments being witnessed in the creative industry. African governments in general seem to adopt reactionary rather than visionary policies towards creative industries issues with limited prior planning or appropriate policy measures in place. The financial institutions are not keen on betting on Intellectual Property Rights as a means of securing funds for the Creatives. In implementing the AKE, GESCI sought help from IP lawyers, private sector players and government officials through policy dialogues intended to change their mindsets in this regard.

According to Mark Kaigwa, the founder of Nendo a local game development and consulting company, Kenyan entrepreneurs need to understand their customers' specific needs and



automation to respond to those needs if they are to succeed in today's highly disruptive digital environment, this includes the AKE's newly established Start-up companies. He adds that small and medium-sized enterprises (SMEs) also need to embrace analytics which can measure the impact of their interaction with customers in order to achieve set objectives in the marketplace.

This is because customers are looking for that “magical experience” when making purchases and interactions with them – one-on-one or virtually – need to deliver this feeling if their loyalty is to be secured.

The growth of the creative industry is heavily dependent on behaviour change. There is need for the artistic youth to acquire new behaviours and skills that promote enterprise development and retention of the same. There is need for the financial institutions, governments and general communities to recognise intellectual work as work that consumes time, energy, and creativity and needs commensurate returns on investments. The community should see that through intellectual work one is able to pay his or her bills and to live off creative work. This can be achieved if tough laws are put in place to guard against piracy, and more effort is put in place to promote the idea of earning from royalties.

Annex 3: AKE Policy Forum Recommendations

The aim of the African Knowledge Exchange (AKE), GESCI's Creative Digital Media project is to support the up-skilling of creative and artistic youth to work and create work opportunities in the Digital Creative Media (DCM) industry.

The AKE is an innovative, creative and start-up programme which combined culturally-based content and digital technologies. The programme meets the changing global job market and employment environments which are increasingly driven by new technologies. Even traditional jobs and services increasingly depend on new technologies for their execution.

In the context of reducing formal employment opportunities, AKE focuses on local entrepreneurship as an empowering, and cost-effective solutions to systemic problems of youth employment. While AKE concentrates on skills and enterprise development in the cultural industries, the researched implementation model is generic in form and applicable to any service industry.

The 2016-2017 final phase of the project called 'Creative Media Venture' focused on deepening youth participant entrepreneurial skills towards development of start-ups for small business enterprises. A Living Lab (LL) research component which was conducted in parallel with the project implementation focused on the implementation and modeling of the creative-skills-entrepreneurial training.

The following recommendations present the participant policy ideas and recommendations for action in response to the 7+1 theses research findings below

- Thesis 1: No one solution or context matters**
- Thesis 2: Entrepreneurship cannot be cloned**
- Thesis 3: Everything is Entrepreneurial**
- Thesis 4: Digital matters but so does physical space**
- Thesis 5: Find a Niche: Cultural competence matters for GESCI**
- Thesis 6: No success without collaboration**
- Thesis 7: Support should continue forever**

In the forum, an eighth thesis was added to the list, that of employment and active job creation.

Thesis 1 & 2 - Context Matters & Flexible Education

General Recommendation: Develop contextual, flexible approaches for learning and skills development that respond to the growth and needs of young entrepreneurs.

New approaches for learning and skills development were made concrete by participant practical suggestions. The most tangible suggestion centred on the concept of project-based, problem-based or opportunity-focused targets as the central focus of learning environments.

Specific recommendations:

- ♦ *Education and business sector stakeholders should collaborate so that the opportunities and problems in new model approaches can truly reflect reality*
- ♦ *Public private partners should encourage a fundamental mindset change and advocacy for alternative educational-biz oriented models*
- ♦ *Partners should engage in defining and providing ideological as well as financial support for new approaches of peer-to-peer learning, problem-solving, internships and mentorships*



Participants during the AKE Policy Forum on March 28, 2017 in Nairobi, Kenya

On March 28th, 2017 GESCI-AKE convened a policy forum attended by participants from the Digital Creative Media industry, NGOs, Kenya's Ministry of Education, Science and Technology, Ministry of Culture, Art and Sports, Ministry of Public Affairs, Youth and Gender, national and regional entrepreneurs and the African Union. The Forum included demos and national, regional and international expert discussions.

At the heart of the forum's discourse was an intensive teamwork break-out session to discuss the Living Lab '7 theses' research findings on the AKE model implementation and their implications for skills development in formal and informal education and training provision.

Theses 3 & 4: Digital and Physical Space and Entrepreneurship

General Recommendation: Develop the learning hub as an agile space, that is continually transforming as a response to different entrepreneurial needs of the student, members, industry, and technology changes

Are capacity building and training spaces reflecting requirements related what is happening in the industry? It is hard to imagine that any hub or organization could independently be able to create agile and transforming spaces, so, again, the forum participants proposed education and business curriculum and practice regulatory frameworks oriented towards start-ups as key.

Specific Recommendations

- ♦ *Education and business stakeholders should consult and learn from policy, industry, research and practitioner chains to inform investment in ICT and new models and spaces for capacity building and training*
- ♦ *Partners should focus on curriculum development that is geared towards and informed by the needs of the market - meaning that education provision includes entrepreneurship and life skills, interdisciplinary education, as well as access to digital tools that are informed by the needs of the market*

Theses 5 & 6: Collaboration and Finding a Niche

General recommendation: Develop education for youth entrepreneurship models that include collaboration, niche projects, and innovation oriented processes (including innovation ideas, prototyping, marketing, mentoring, partnerships etc.)

Collaboration is a science and an art form. Very few teams work creatively and smoothly without specific frameworks. The multi-stakeholder forum highlighted several forms of support to young entrepreneurs that they would find beneficial for their company or industry.

Specific Recommendations

- ♦ *Industry stakeholders should collaborate with young entrepreneurs to provide relevant and timely skills development opportunities via industry oriented internships and mentorships, case studies and sponsorships.*
- ♦ *Education sector stakeholders should gear provision towards innovative practice and innovation skills development that are embedded in the innovation for profit niche*
- ♦ *There is a need for education sector policy makers and providers to implement existing policies for 21st century skills development and to incentivize new policies towards innovative design in upscaling and disseminating working models of edu-biz capacity building models (like the AKE model and its niche focus on Cultural and Creative Media industry).*

Theses 7 & 8: Continuous Support, Employment & Job Creation

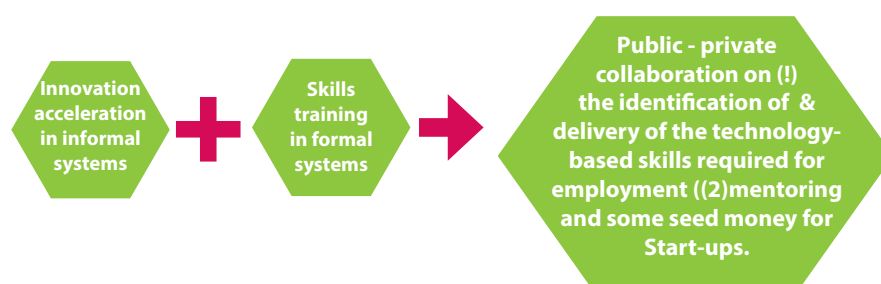
General recommendation: There is a requirement for leadership and vision for system overhaul from ‘once off training’ to ‘continuous support systems’ for youth training and retraining outreach via models and labs linked to industry sectors

The shift from “once-off-training” to continuous support systems for youth training and retraining outreach via models and labs linked to industry sectors needs leaders, leadership, in order to happen.

Specific Recommendations

- ♦ *Educators should integrate comprehensive skills training in formal systems and training accelerators in informal systems*
- ♦ *Providers should change the role of digital hubs to create conducive environments for entrepreneurship to thrive*
- ♦ *Educator and business partners should engage in creating an edu-biz training continuum to enable continuous support systems that are adaptable and responsive to the speed of market changes and skills needs*

One recommendation is a “value chain” of training, envisioned in the policy forum as follows:



Annex 4: Inventory List

AKE ASSETS INVENTORY 2016/2017		
Date of Purchase	Description	EURO
31/03/2016	I Mac Desktop Computer	1,648
31/03/2016	Lenovo Laptop	695
12/04/2016	Purchase of Epson Projector	441
30/10/2016	Yamaj MG16XU Mixer 16 Channel Mixing Console	593
30/10/2016	3 ASUS Gaming Laptops	4,144
TOTAL		7,521

Annex 5: List of publications/documents/studies

1. Horowitz, M. A. and Saarinen, V. (2015) GESCI-AKE 2014/2015 Creative Media Skills Course “The Sound of the City” - Living Lab Research Component: Final Report, Retrieved from: <https://thesoundofthecity.wordpress.com/>
2. Horowitz, M. and Botero, A. (2017) GESCI-AKE Creative Media Venture 2016-2017: Living Lab Research ZComponent [Online]. Available at: <http://culturalindustriesafrica.org/wp-content/uploads/2017/04/GesciAkeFinalReport-march29-20171.pdf>
3. Horowitz, M. (2017) 7 Theses about Youth Entrepreneurship [Online]. Available at: <https://gesciakemediaventure.net/2017/03/12/lessons-from-gesci-ake-7-theses-about-youth-entrepreneurship/>
4. AKE Policy Forum Report: Linking new skills, business opportunity and job creation for cultural industry development in Africa [Online]. Available at: <http://culturalindustriesafrica.org/wp-content/uploads/2017/04/AKE-2015-Policy-Forum-Report.pdf>

Annex 6: Financial report

AKE END OF PROJECT FINANCIAL REPORT 2016/2017			
Expense Description	Budget 2016 €	Actual Expenditure €	Variance €
GESCI staff time	102,250	94,791	7,459
Travel	20,198	19,102	1,096
Workshop	4,935	4,432	503
Consultancy Costs	71,961	64,279	7,682
Other Project Costs	35,347	34,690	657
Office operations cost	15,310	15,285	25
Total	€ 250,000	€ 232,579	€ 17,421

Summary

Receipts

Receipt from AKE 2016 250,000

Total Income 250,000

Expenditure

Expenditure January 2016-June 2017 232,579

Balance 17,421

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