

SiMODiSA  
START-UP

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TECHXIT  
EXECUTIVE  
SUMMARY



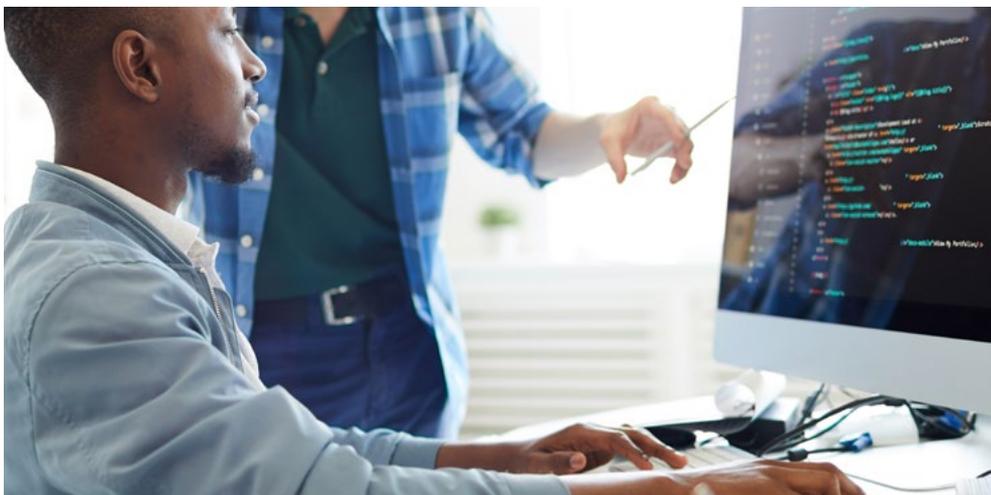
TechXit is a Digital Skills Optimisation Initiative launched by SiMODiSA, a non-profit public benefit organisation, established by high-impact entrepreneurs. It is the result of an extensive process of engagement with over 100 organisations, NPOs and stakeholders involved in the shaping, creation and delivery of digital skills in South Africa.

The TechXit Digital Skills Optimisation initiative is aimed at both positively addressing various identified shortcomings in the South African digital skills ecosystem / value chain as well as delivering new forms of value, created through the development of digital skills, to employers and the public in South Africa.

The TechXit initiative seeks to first and foremost understand why the digital skills supply gap is widening compared to the demand and formulate a 10 year + intervention program to stem the tide in collaboration with the broader digital skills supply and demand ecosystem. The initiative is different from others as it is led by industry and entrepreneurs whom agree that the skills gap is larger than the jobs gap and are mobilising to do something about it.

**Additional benefit from the initiative will include but are not limited to:**

- shoring up digital skills education in schools (Phase 1 interventions)
- reducing the cost and consistency of digital skills pathways & training outcomes (Phase 2 interventions)
- the creation of a sustainable digital hub & apprenticeship infrastructure investment theses (Phase 3 interventions)
- a better marching of current and future supply and demand (Phase 4 interventions)

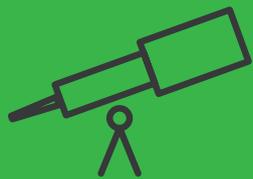


Ultimately the initiative aims to achieve a significant increase in digital skills placements and additional digital skills related job creation, driven by existing domestic demand, increased domestic demand as we look to re-shore more and more services back to South Africa and finally as a net 'export' of digital skills services as we market the newly created capacity as part of South Africa's Outsourced Business Processing capability. This will contribute both to the competitiveness of South African business as well as to quality job creation in the country.

The TechXit initiative's Higher Purpose is to unlock the full potential for South Africa's youth within a modern world (4IR) and create a thriving society.



TechXit's **Mission** is to provide the digital skills capacity building programme and a job creation framework needed to fuel South Africa's economic growth in a win, win private public partnership ecosystem



TechXit's **Vision** is for South Africa to become a digital skills powerhouse through ensuring that it has the right skills, at the right place and the right price to satisfy domestic and international demand at scale.

The quantification of this vision is that the Techxit will develop the necessary digital skills, through programmes at a school, school-leaver, apprentice and intern level, to fill one million technology focused jobs. Achieving this target will require a re-appraisal of South Africa's current Digital Skills Value Chain.



The key challenges to which TechXit is responding is that the gap between the demand and supply of digital skills in South Africa is widening. This gap is driven by a number of factors including:

- historical socioeconomic factors
- current educational challenges, including its inability to augment and adjust curriculum in a fast-changing 4IR context
- access to digital skills programmes, access to digital skills mentorship and apprenticeship
- the significant increase in the demand for digital skills driven by the exponential rate of digitisation in the world

Digital skills training programmes produce a significant cohort of digital talent annually. The challenge is the sustained employability of this talent, with only approximately 23% of the supply of this talent being employed at the end of their respective programmes AND a significant number of interns leaving employment within the first 12 months. This means that the current Return On Investment (ROI) on the production of these digital skills is exceptionally low.

The challenge is therefore one of employment success – ensuring that ‘the right digital talent is in place at the right time, at the right price and that the employment of such digital talent is sustained over time.’ The outcomes of employment success are traditionally achieved in a number of different ways:

- Through the provision of relevant digital skills at school, enabling access to entry-level digital jobs. All further development of skills is acquired on the job or through the provision of employer / employee funded learning programmes
- Through the provision of learning programmes incorporating skills, expertise and competence

delivered by tertiary education institutions such as technical colleges and universities

- Through the provision of learning programmes focused on the formal acquisition of a range of digital skills, delivered by other learning institutions such as private sector, for-profit institutions or non-profit NGOs or other philanthropically funded institutions.

**There are a number of subsidiary challenges currently experienced, including;**

- Poor absorption of post-school learning graduates by the employment marketplace due to lack of relevant work experience and core competencies, despite incentive programmes such as the YES programme.
- Poor record of sustained employment post placement with an employer (once the incentive runs out and the ‘free market’ kick’s in the journey ends and the investment is lost, worst the learner goes back to their life prior to intervention disillusioned.)
- Poor / inadequate work experience for candidates, due to ‘blunt instrument’ placement for the sake of placement vs relevance.
- Limited supply of people with appropriate quality digital skills is driving up employment costs of South African companies.
- The source of graduates from skills development centres are of poor quality. Demand outstrips the supply of suitably qualified / experienced candidates.



In summary, there is currently a mismatch between the demand for digital skills and the supply of relevant, employable digital skills. Digital skills provided do not meet the expectations of employers and consequently not all of those who go through structured learning in digital skills are absorbed into employment. Employers resort to acquiring skills outside the country, (therefore importing the skills through outsourcing), learners remain unemployed or underemployed and the ROI on digital learning intervention is sub-optimised.

Balancing the Demand and Supply of Digital skills / talent requires an ongoing re-evaluation of the nature and type of Demand as technology develops and progresses at a high pace of velocity and change. The current imbalance however does pose a meaningful risk to the scaling and growing of high growth companies as well as pose a significant opportunity to create thousands of jobs by better aligning and matching.

It requires an ongoing re-evaluation of Supply as the sources of digital skills change and as curricula change to meet changes in Demand. It is also a self-reinforcing pattern that may not operate in a typically linear fashion. For example, as the Supply of digital skills increases and those skills have an impact on South Africa's technological capability, Demand for skills may increase at an exponential rate as the digital sector booms and / or there is an increased demand from the global digital skills marketplace for South African digital skills.

Optimising the relationship between the Supply and Demand for digital skills may require an advanced digital application or platform, capable of analysing interactions and information with built-in predictive analytics, Artificial Intelligence and Block-chain verification, to deliver actionable intelligence. This platform would allow suppliers of digital skills and skills development and employers to transact in such a way as to create an accredited marketplace for digital skills. Economic and other incentives may then be applied to optimise the necessary balance between Demand and Supply.



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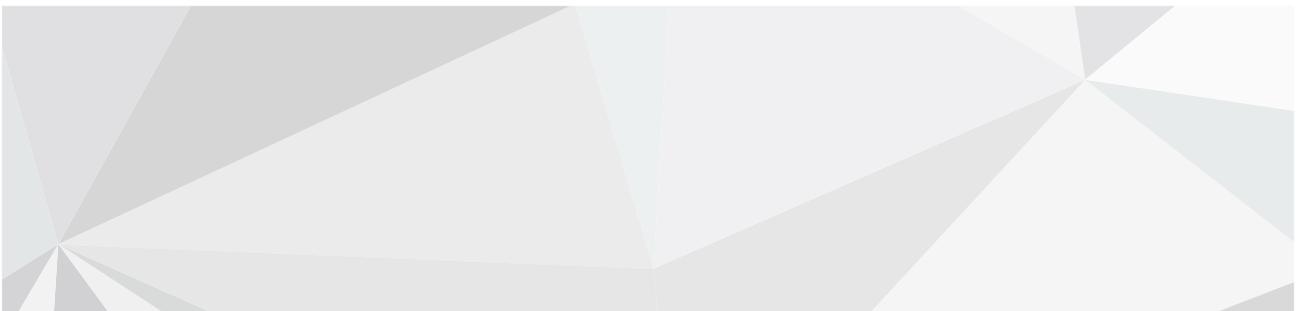


```
if (locationString.contains(", ")) {  
    locationString = locationString.rep  
}  
  
String[] location = locationString.split  
Preconditions.checkNotNull(expression: lo  
double lat = Double.parseDouble(location  
double lon = Double.parseDouble(location  
  
return new Point(lat, lon);  
}
```

```
@Override  
public default Repository<CommunityDocumen  
CommunityRepository, CommunityDocumen  
CommunityService, CommunityService  
defaultCommunityServiceStrategy  
{  
    this.communityRepository = communityRepository  
    this.communityService = communityService  
    this.strategy = strategy;  
}  
  
@Override  
public void indexFrom(Collection<Community> communities) {  
    Collection<CommunityDocumen> documents = communities  
        .stream()  
        .map(community -> community.toDocument())  
        .collect(Collectors.toList());  
    communityRepository.saveAll(documents);  
}  
  
@Override  
public Collection<Community> search(String searchQuery) {  
    List<CommunityDocumen> documents = strategy.searchQuery(  
        Collection<Community> as an array(listen)  
    List<Community> retrievedCommunities = documents.stream().map(documen -> communityRepository.findById(documen.getId()));  
    return retrievedCommunities;  
}  
@Override  
public Collection<Community> search(String searchQuery, Collection<CommunityDocumen> documents) {  
    return retrievedCommunities;  
}
```

# TechXit's picture of success is:

- **1 million digital jobs within the next 10 years or less.**
- Sustained employment of 1,000,000+ young people.
- **Digital talent emerging from digital learning programmes in South Africa**
- 'Rights digital skills available at the right time at the right place at the right price, in South Africa'
- **Digital skills available and able to serve demand from outside of South Africa**
- The acquisition of digital skills is well-funded in ways that meets the needs of both learners and learning institutions
- **Unemployment is reduced through the creation of quality digital jobs**
- Employers value the digitally-skilled people they employ as a result of this process
- **Learners are well positioned for rewarding digital careers**
- Learners are able to maintain an acceptable quality of life whilst learning
- **A common, trusted system of accreditation of service providers is in place**
- Adequate, highly-proficient digital skills trainers and training institutions are in place
- **A though, robust, well described portfolio of current and future job families exists – clearly describe the digital skills universe required**
- Smooth transition from school to post school digital learning with minimal churn / fallout of participants
- **An appropriate balance of remote and onsite learning designed by highly skilled digital-learning developers**
- Mentors who are able to assist learners to bridge the gap between learning and work



The issue of funding digital skills development is of critical importance. The following principles will be explored as potential ways of increasing the availability of funding for digital skills:

- Redirect existing spend to re-shore work: Working with dti, National Treasury, the Department of Labour as well as local governments to provide incentives to the formal sector to re-direct 20% of their current offshore spend on digital and professional services to an in-shoring programme. Such services (software development, QA, digital design, AI, etc.) will be delivered through the creation of new service providers as well as the enabling of existing service providers, in certified 'Centres of Excellence' (COE's).
- Allocate 20% of funds towards ecosystem support: To fund COE's with the skills required, it is proposed that 20% of the fees received for services rendered should be paid into ecosystem Digital Skills Hubs (DSHs). DSHs would enable the training and development of digital skills within schools (10%) and outside schools (10%). This would be achieved through the development and enablement of the existing 200+ digital skills ecosystem partners, within a certified digital skills framework.



To deliver successfully on this Picture of Success, TechXit task teams will focus on creating a collaborative 10 year intervention programme framework whereby South Africa will be able to:

- Scale up digital skills programmes in schools (Phase 1)
- Increase the quality and relevance of digital skills learning programmes (supply and demand matching) (Phase 2)
- Establish alternative absorption and apprenticeship models that will de-risk investment in digital skills (Phase 3)

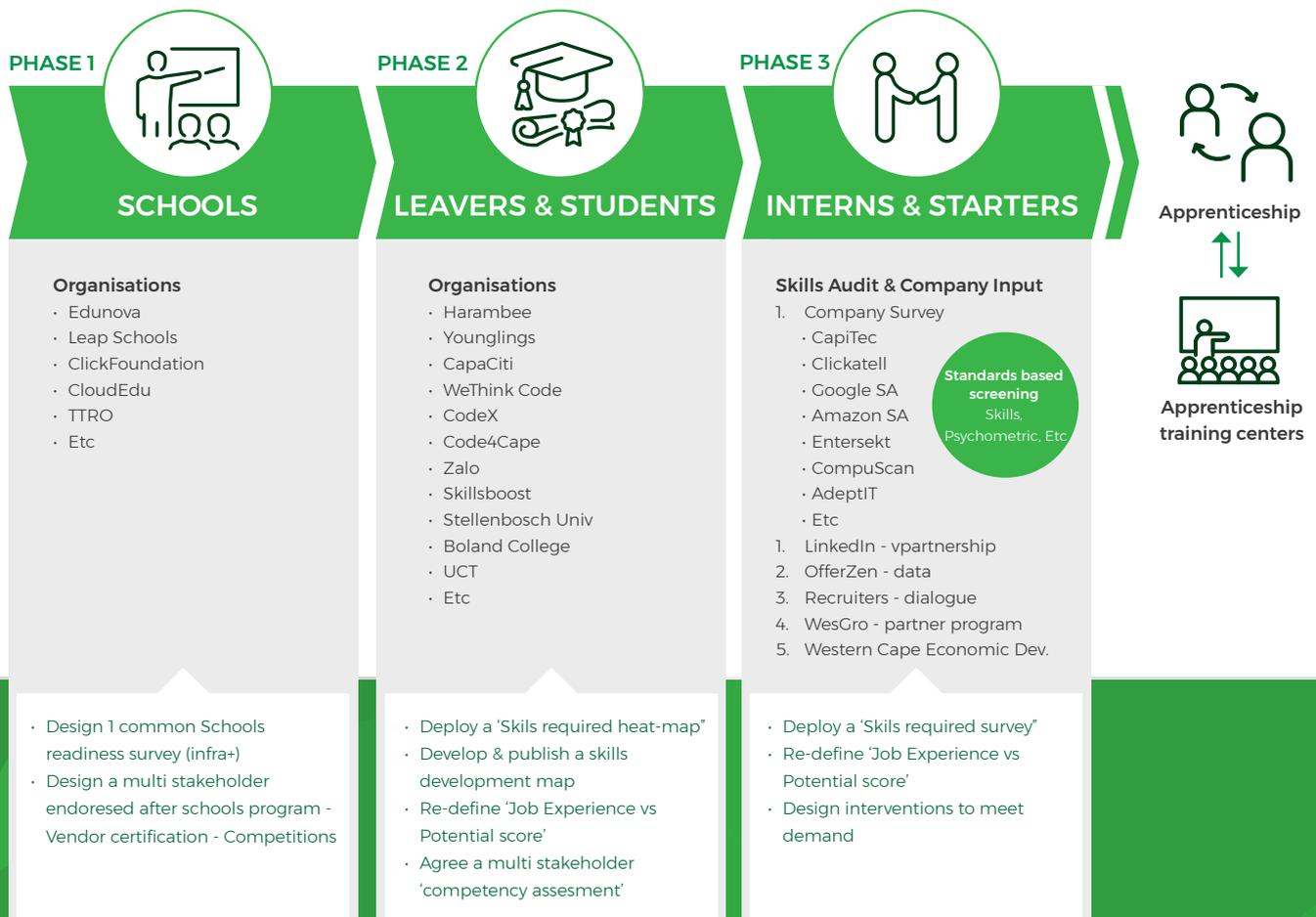
The following illustration sets out the phases of work of the TechXit initiative:

**Part 1:** Map the talent journey funnel: Work with Researchers & Universities

**Part 2:** Design a continuum with the ecosystem including standardized screening, definitions, etc

**Part 3:** Launch a school labs program

**Part 4:** Talent demand survey



The TechXit initiative supports the view that it is necessary for Industry and the Government to collaborate on the creation of a 10+ year intervention programme, enabled through collaboration amongst digital skills ecosystem players. In doing so, the digital / technology sector in South Africa could become one of South Africa's biggest economic growth opportunities as it creates hundreds of thousands of local job opportunities and generate billions of rand in domestic earnings and revenue inflows from digital work outsourced to South Africans.

