



**6th NATIONAL ICT SUMMIT**  
**Venue: NIPAM, Windhoek, Namibia**  
**7th – 9th October 2019**  
**Theme: “Accelerating Digital Transformation”**

Dr. Stanley SHANAPINDA  
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Optus La Trobe Cyber Security Research Hub

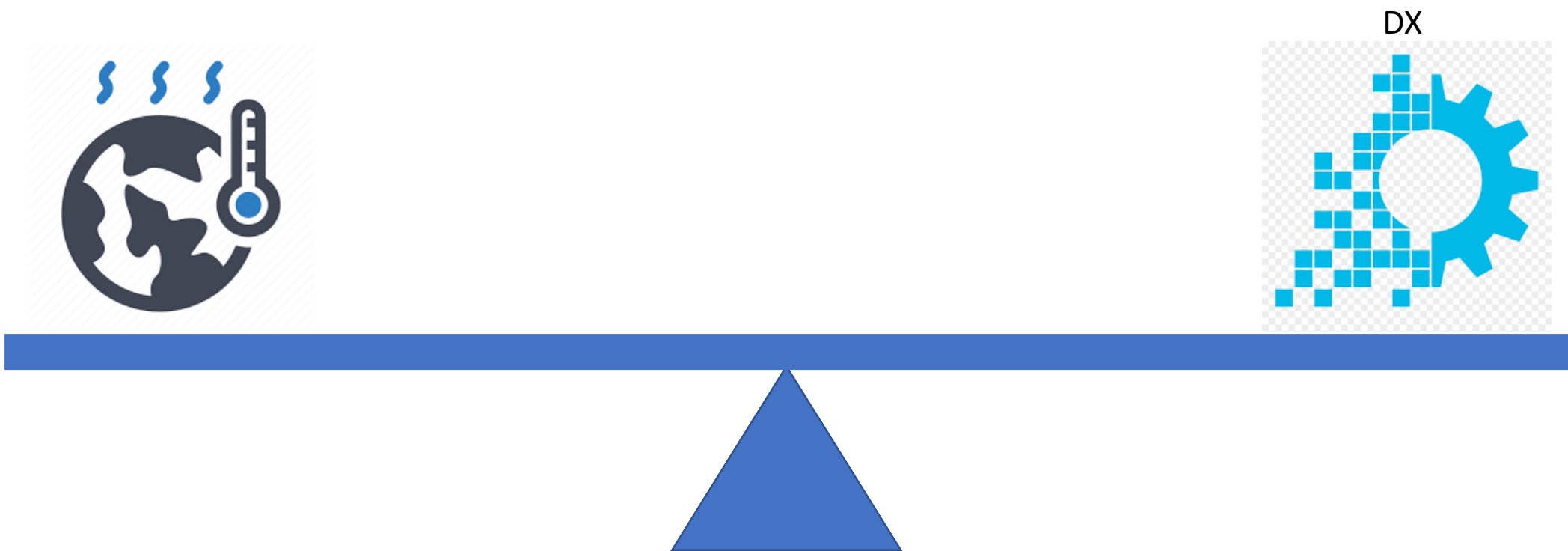
Day 1, Plenary Speech at 12:20-12:55, Monday, 7 October 2019

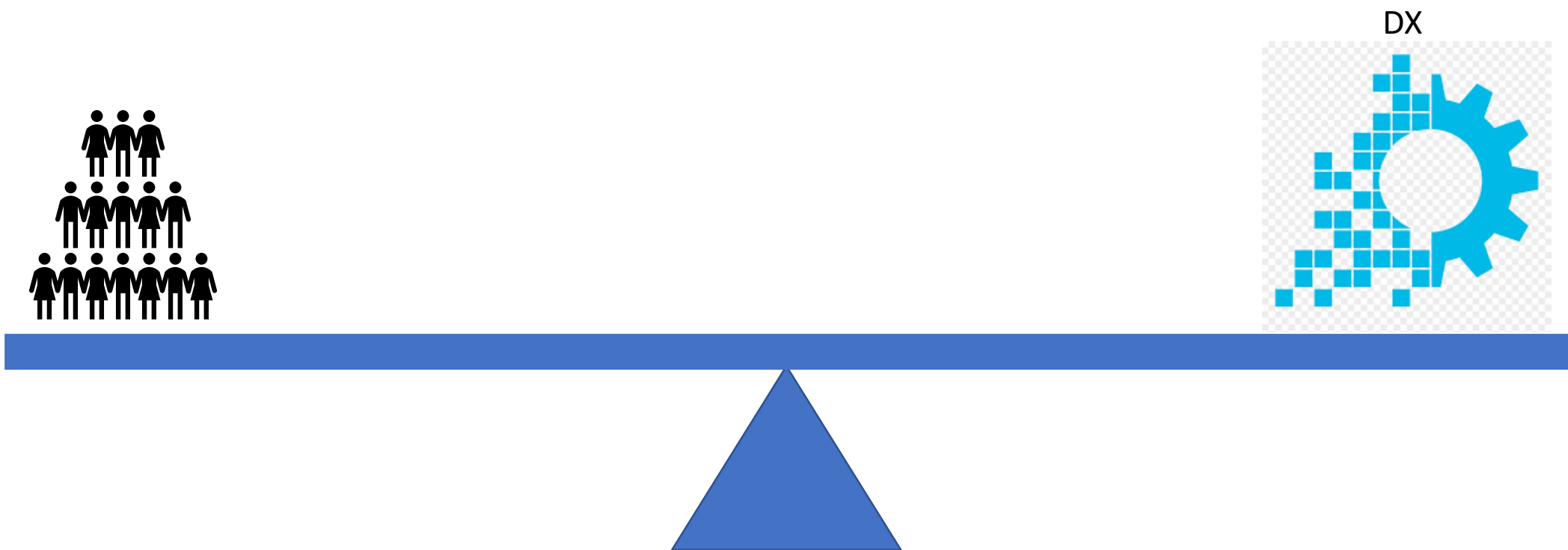


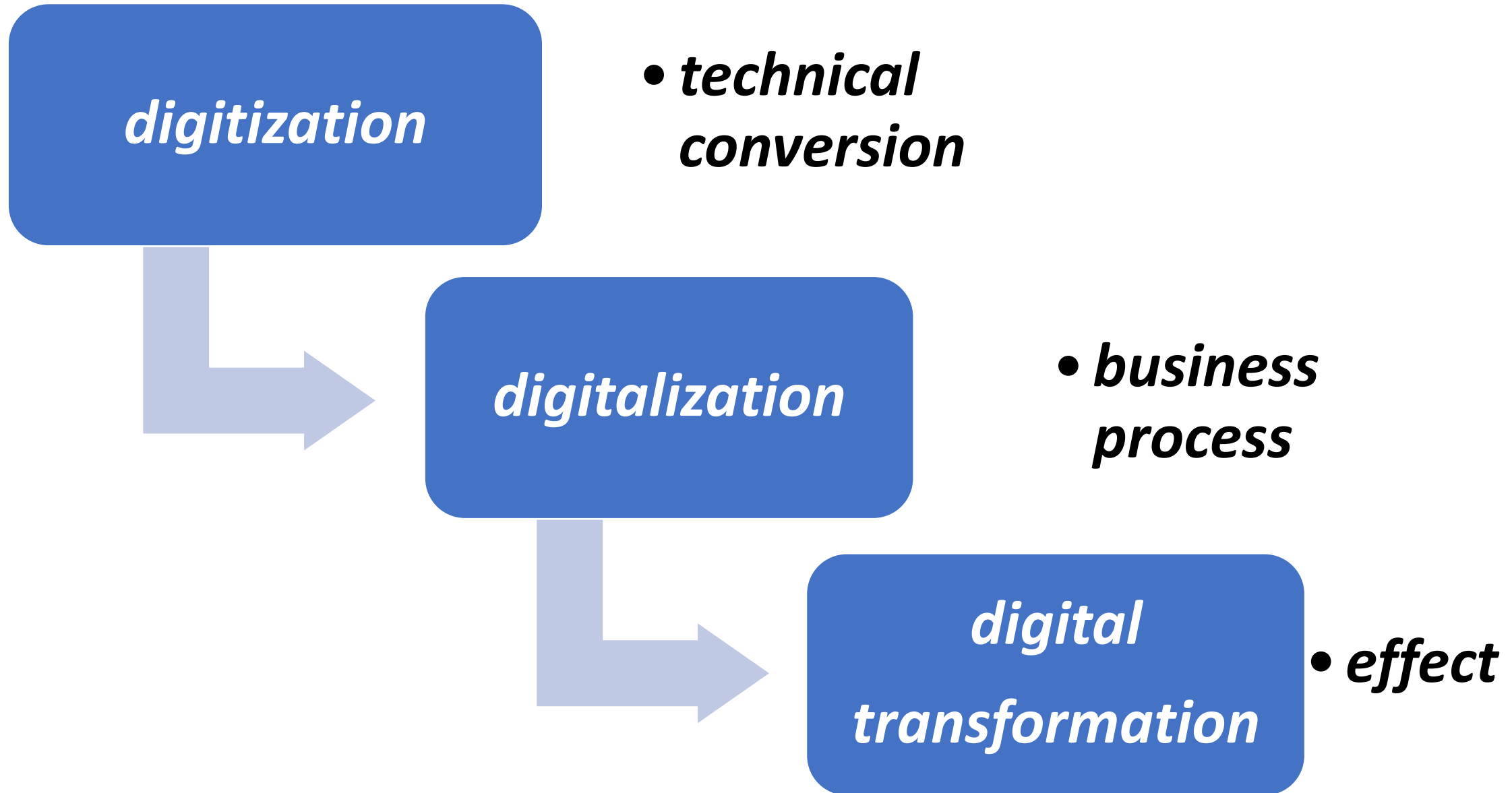
# Making Digital Transformation Work for the People

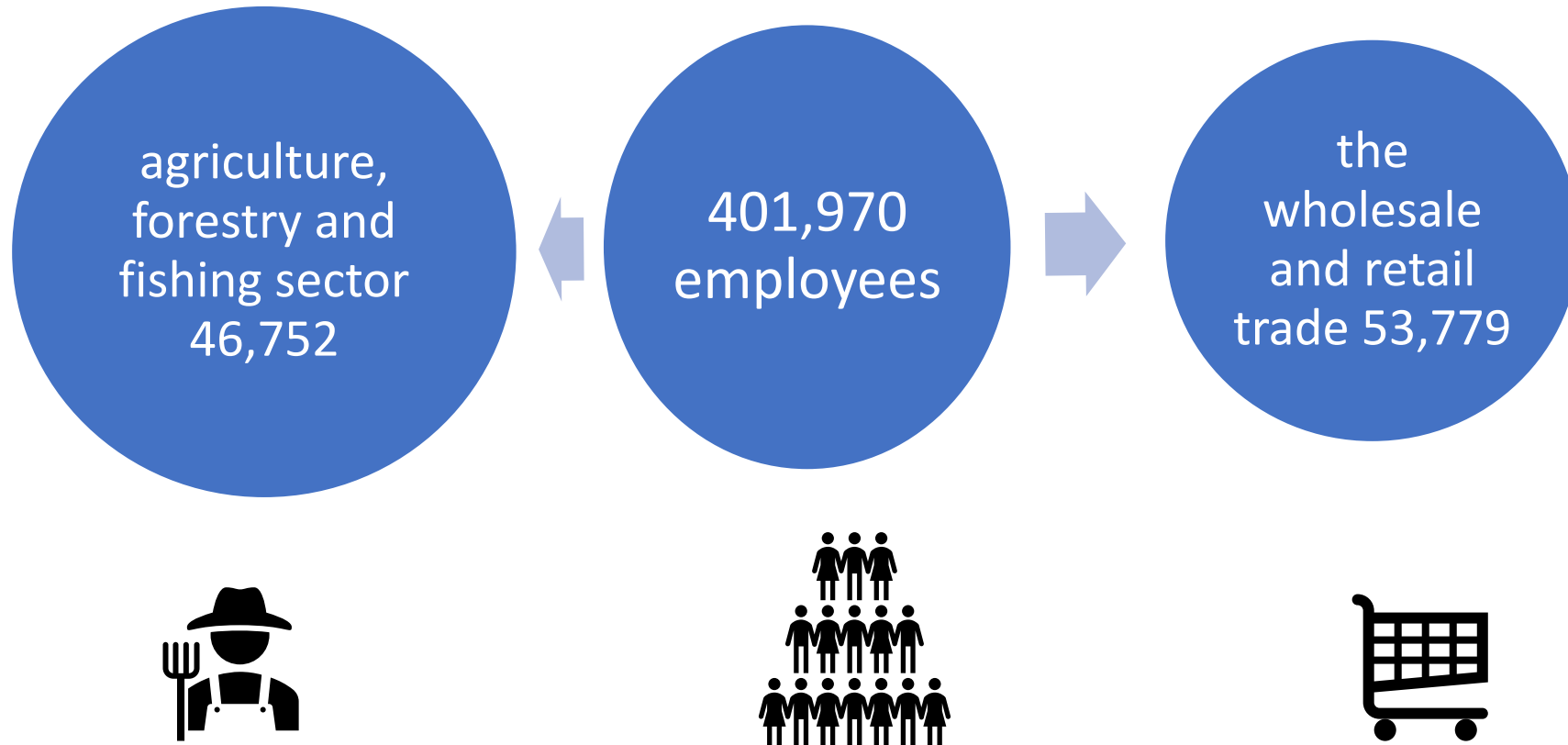
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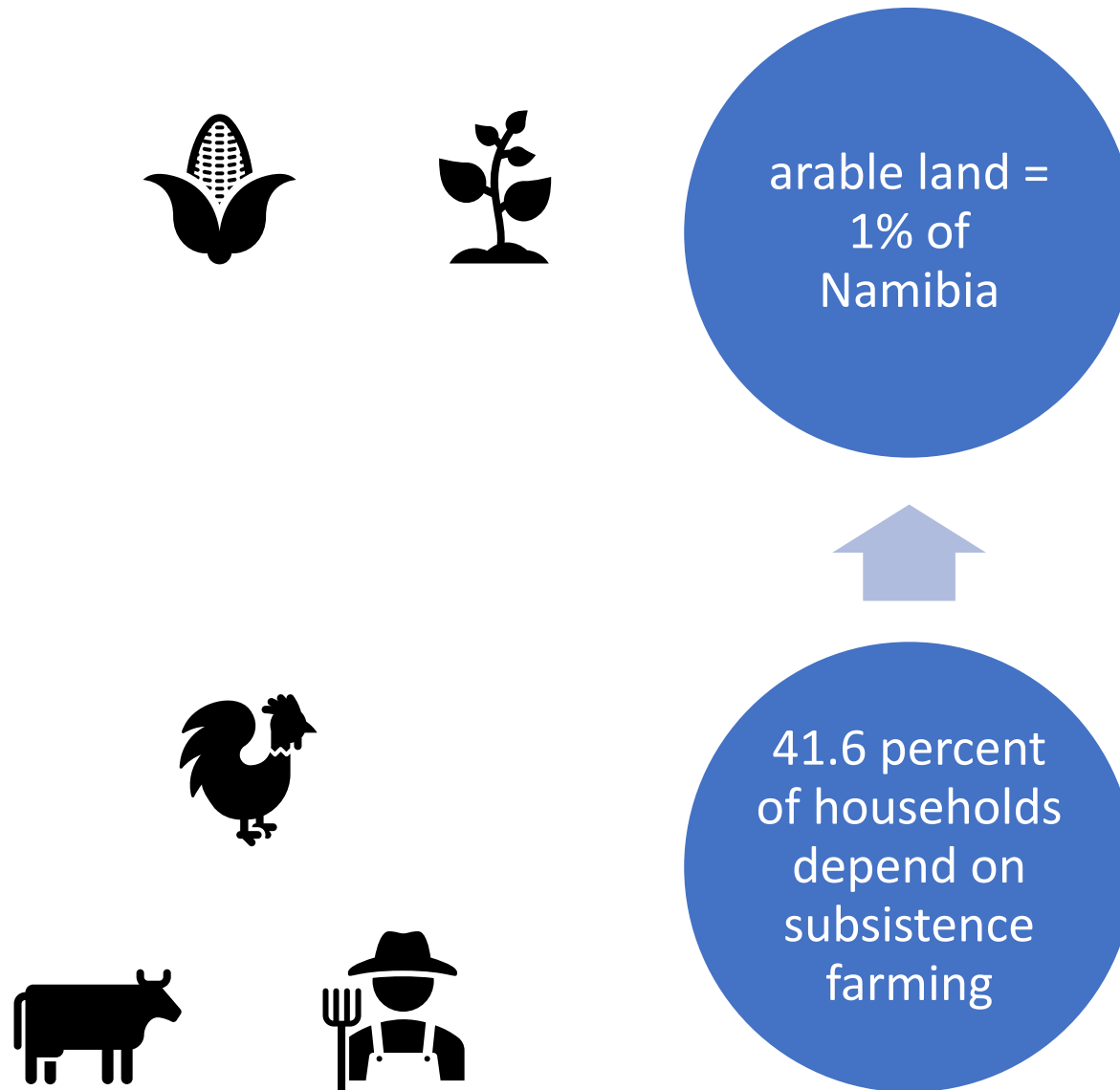
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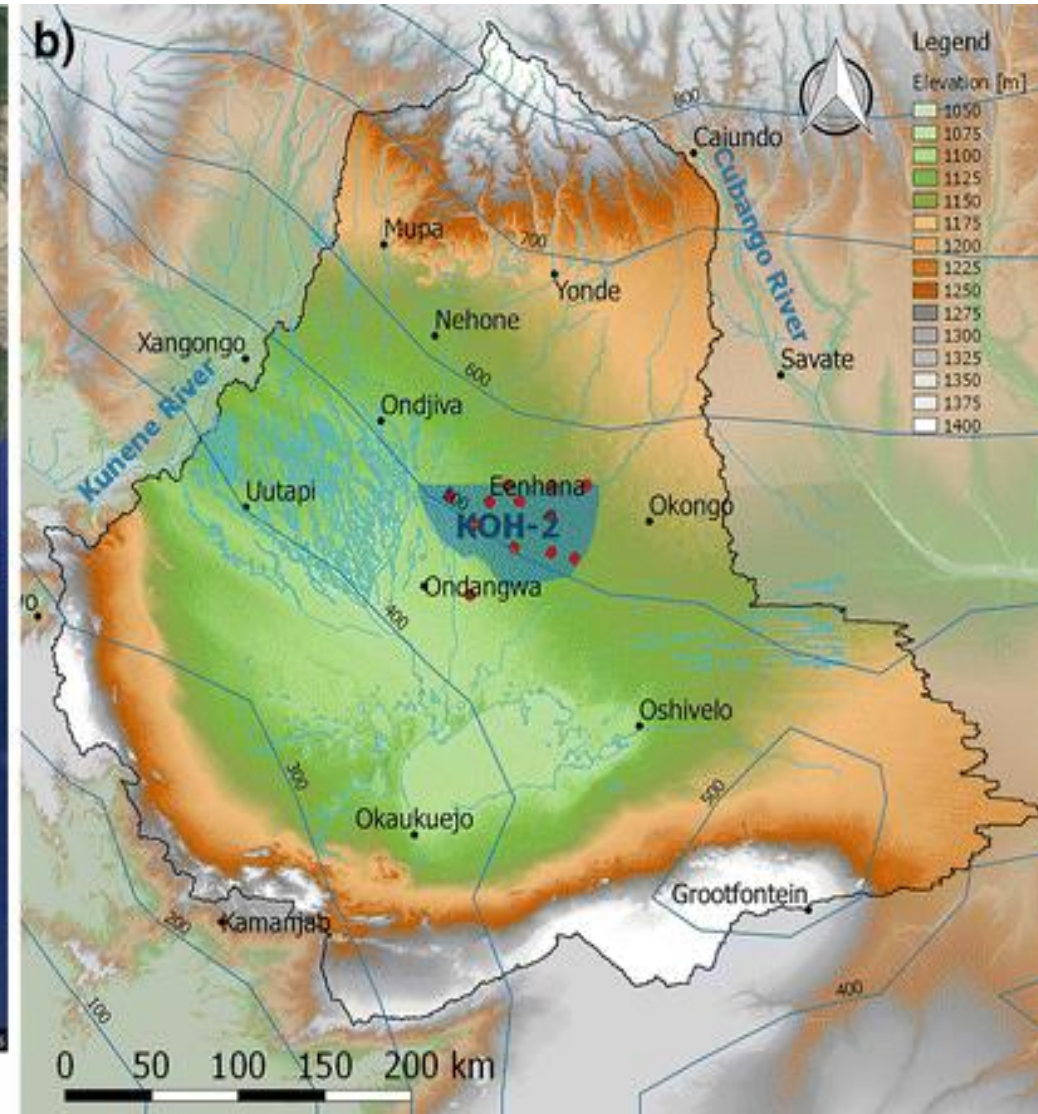
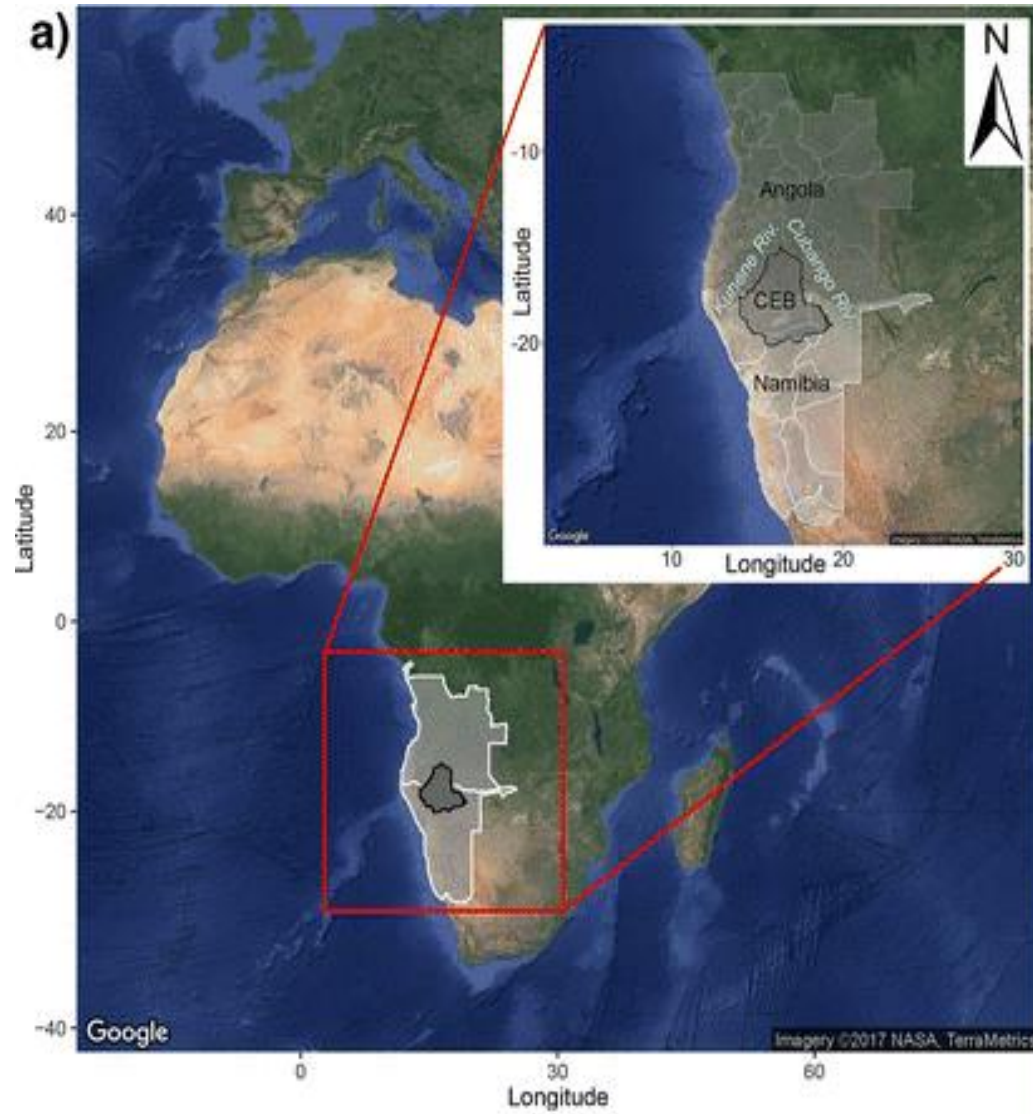






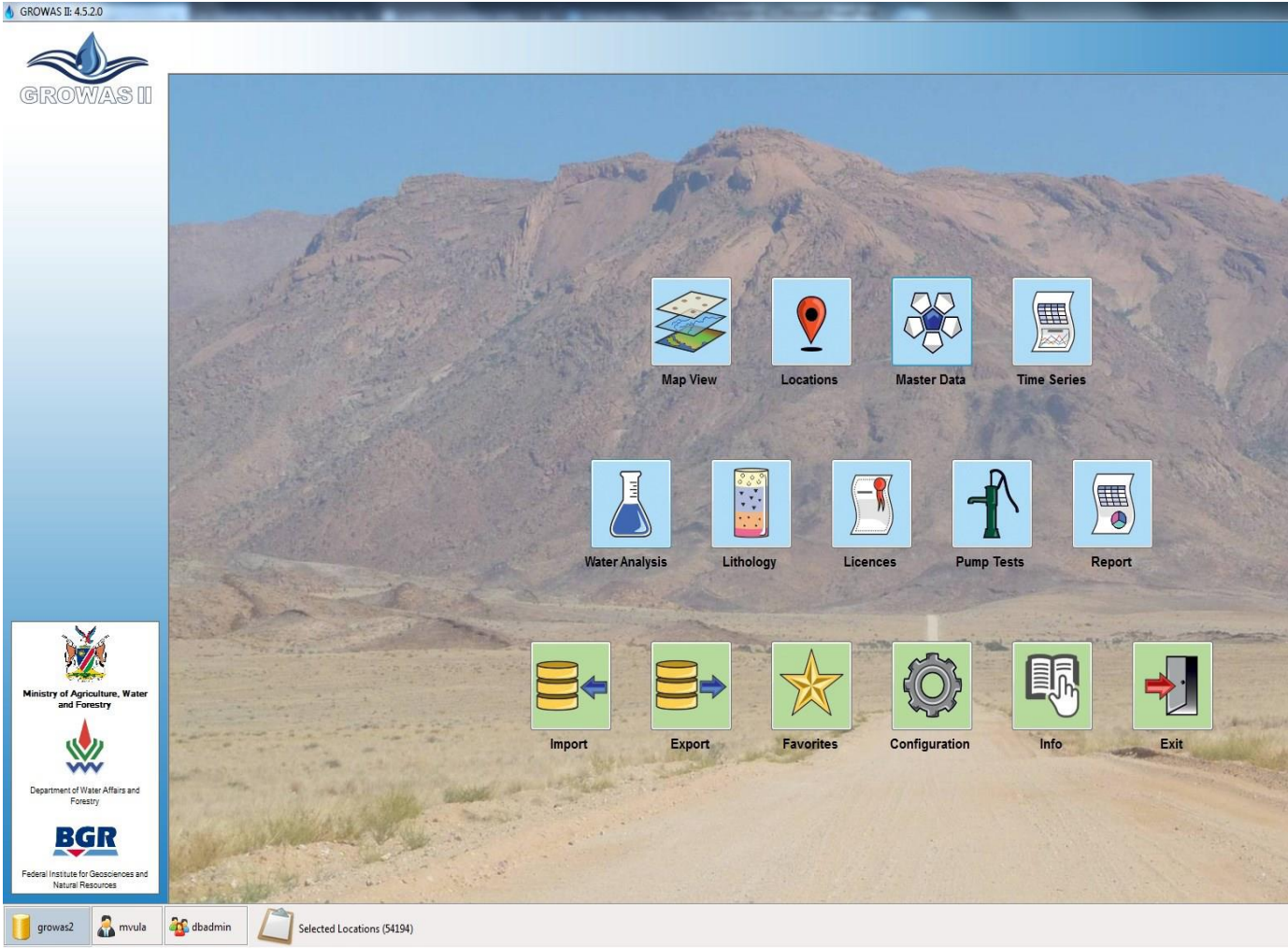


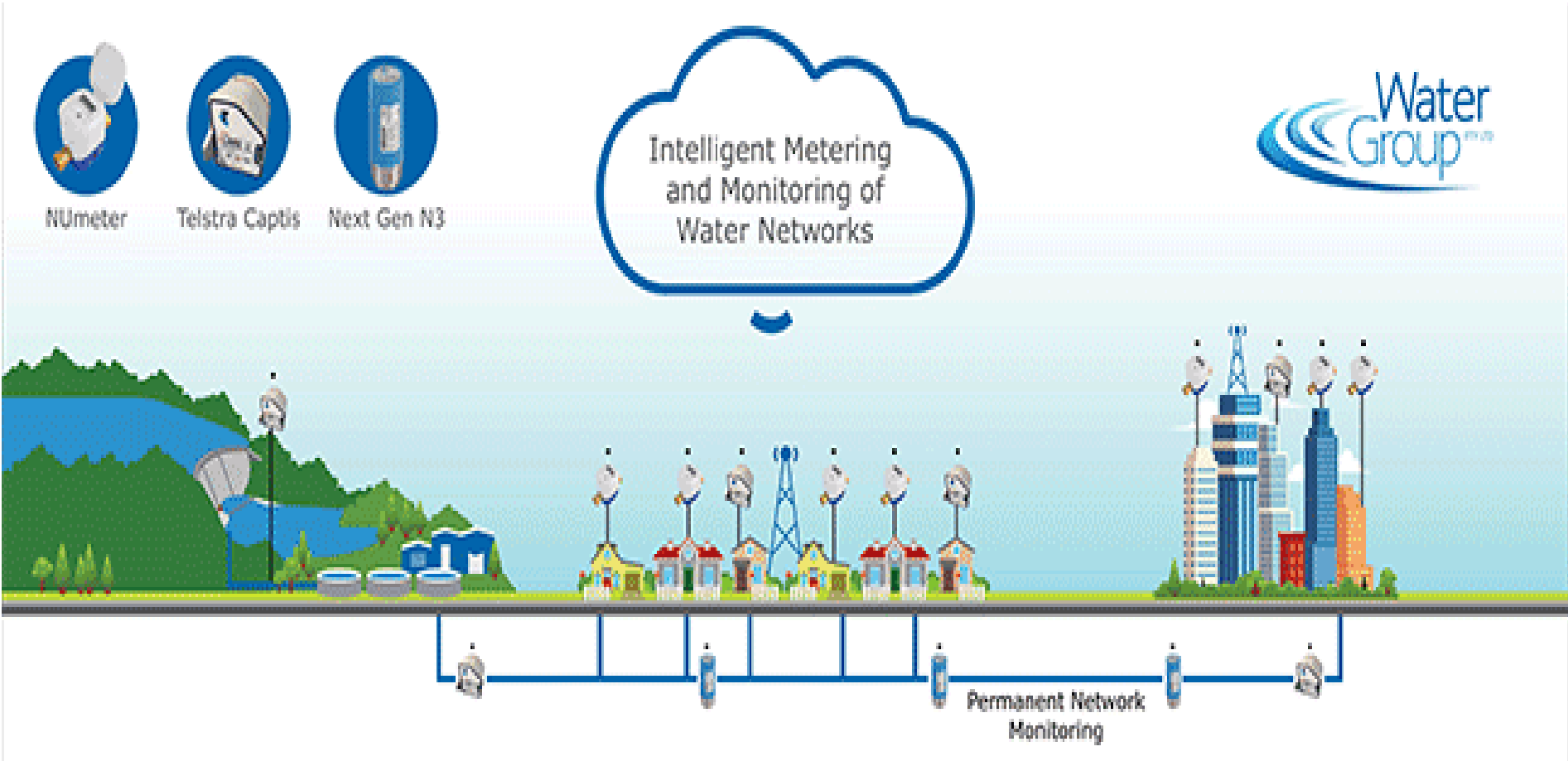






# GROWAS II Modules

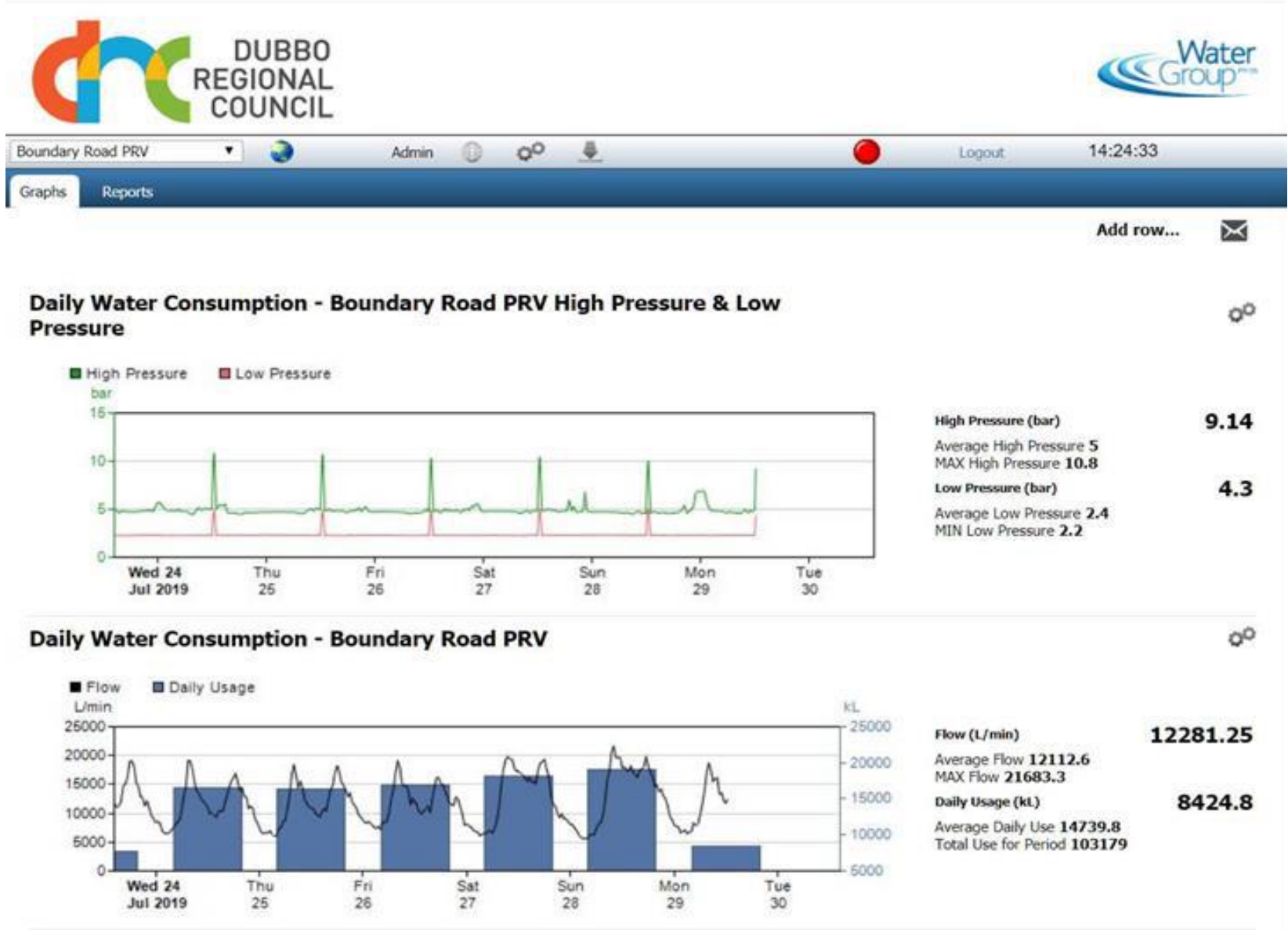


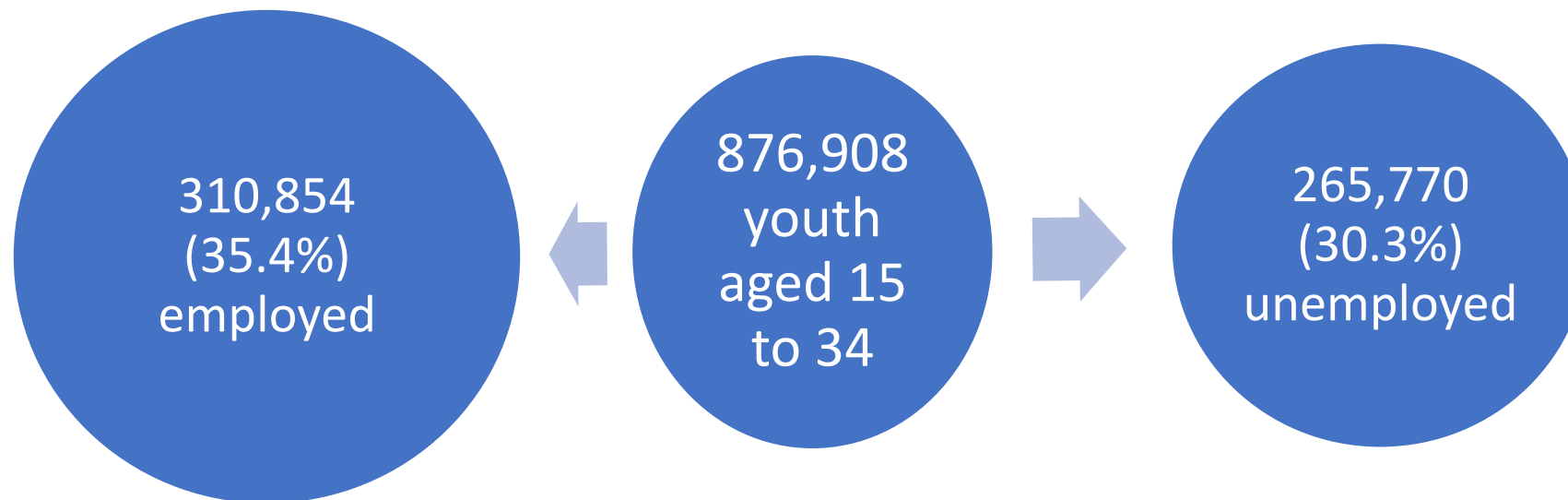










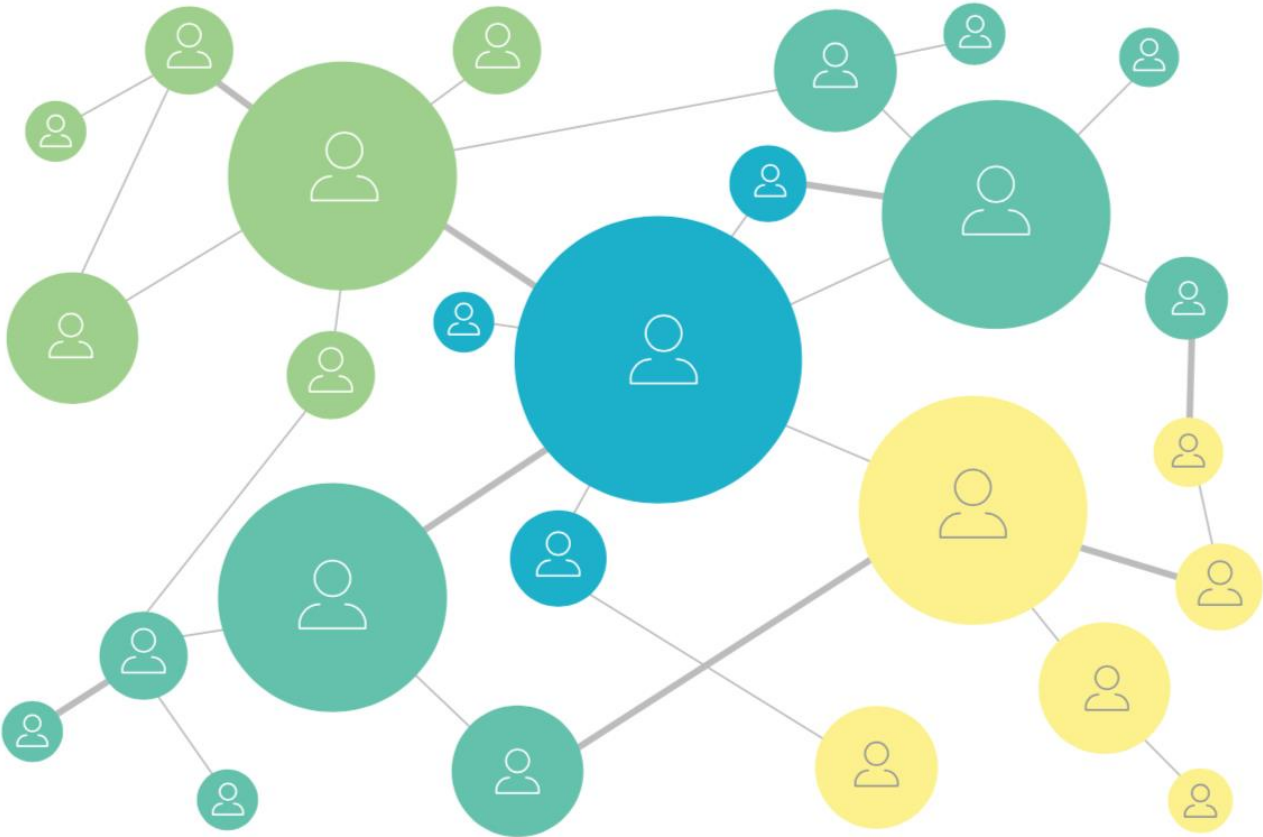






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# CIOs & CVs

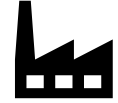


1. TISN & ISMS
2. Law: AAA - Managed Service Provider Partner Program (MSP3)

2.

Requirements

Controls



1. TISN & ISMS
2. Law: MSPs

R

C

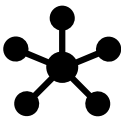


DEMOCRACY  
OF THE PEOPLE BY THE PEOPLE FOR THE PEOPLE

1. TISN & ISMS
2. Law: Espionage and Foreign Interference
3. Law: MSPs

R

C



1. TISN & ISMS
2. Laws: TIA, TA, AAA

R

C



1. TISN & ISMS
2. Laws: AAA

R

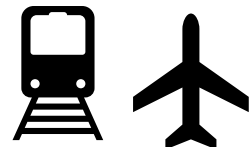
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1. TISN & ISMS
2. Laws: AAA

R

C



1. TISN & ISMS
2. Laws: AAA

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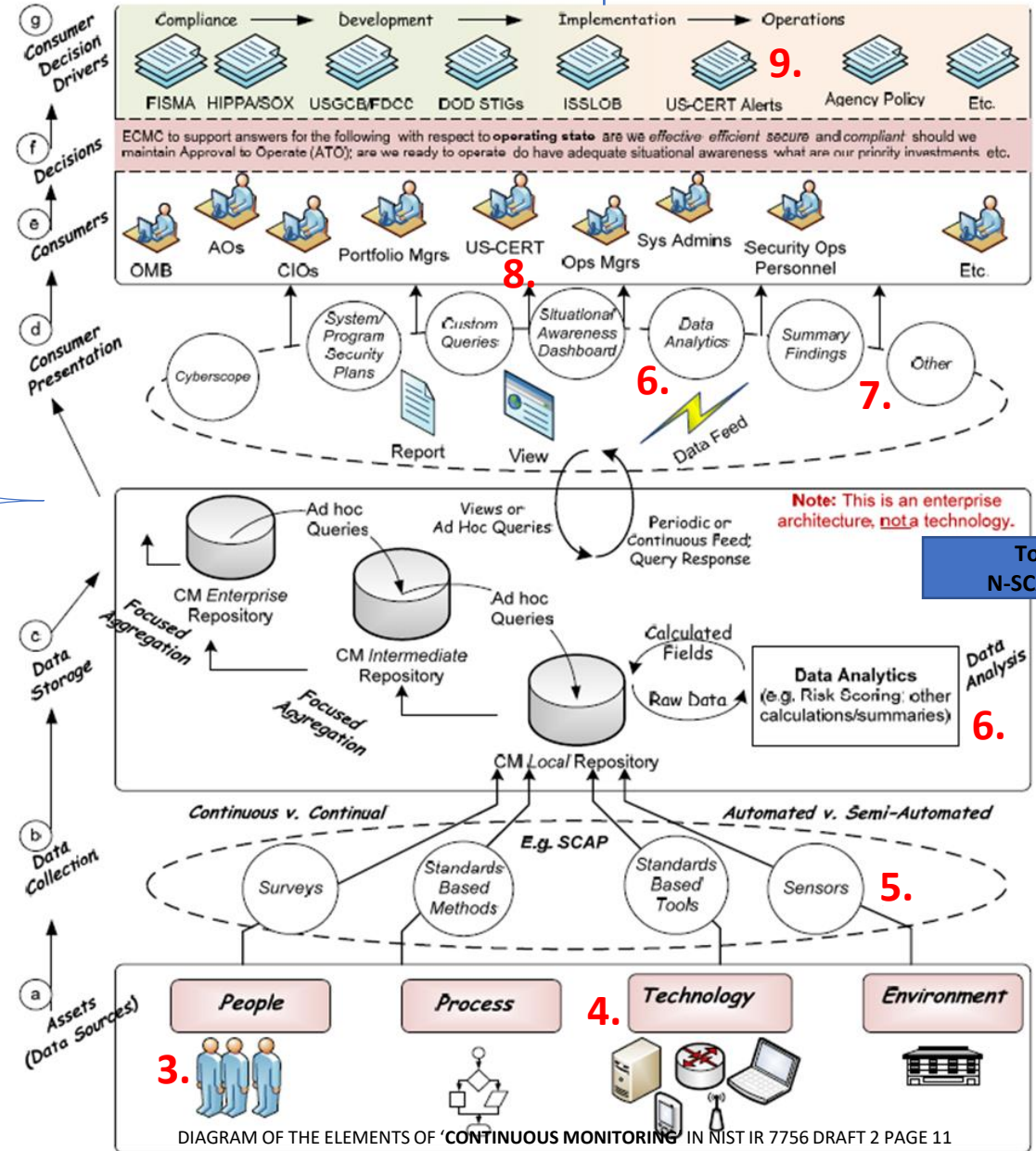
1.  
CW

& THREAT

HT

## Organisational-CSA

9.



2, 3, 4, 5 &amp; 6.

## Requirements

Schedule 1 Data retention  
Part 1 Main amendments

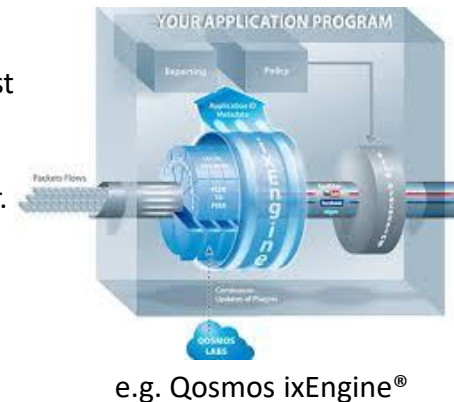
Kinds of information to be kept		
Item	Topic Column 1	Description of information Column 2
		(d) any identifiers relating to the relevant service or any related account, service or device, being information used by the service provider in relation to the relevant service or any related account, service or device;
		(e) the status of the relevant service, or any related account, service or device.
2	The source of a communication	Identifiers of a related account, service or device from which the communication has been sent by means of the relevant service.
3	The destination of a communication	Identifiers of the account, telecommunications device or relevant service to which the communication: (a) has been sent; or (b) has been forwarded, routed or transferred, or attempted to be forwarded, routed or transferred.
4	The date, time and duration of a communication, or of its connection to a relevant service	The date and time (including the time zone) of the following relating to the communication (with sufficient accuracy to identify the communication): (a) the start of the communication; (b) the end of the communication; (c) the connection to the relevant service; (d) the disconnection from the relevant service.
5	The type of a communication or of a relevant service used in connection with a communication	The following: (a) the type of communication; Examples: Voice, SMS, email, chat, forum, social media. (b) the type of the relevant service; Examples: ADSL, Wi-Fi, VoIP, cable, GPRS, VoLTE, LTE. (c) the features of the relevant service that were, or would have been, used by or enabled for the communication. Examples: Call waiting, call forwarding, data

## Controls

## Beyond IP Traffic Classification: Metadata Extraction from Network Traffic

**Qosmos ixEngine®** extracts 8 main categories of network-based application metadata and computed metadata:

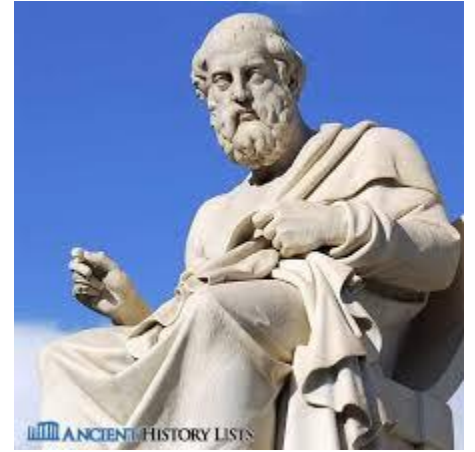
- **Volume:** e.g. the volume of traffic per application and per user, size of a web page including all its components
- **Application usage:** e.g. HTTP URL or name of video played in YouTube. Qosmos delivers 5000 application metadata to enable smarter decisions based on full understanding of user behavior
- **Service identification:** e.g. audio, video, chat, file transfer for most popular VoIP and IM applications
- **Application performance:** e.g. delay and jitter / application / user. Qosmos ixEngine also provides computed metadata like VoIP MOS and Rfactor
- **Identifiers:** e.g. email sender / receiver addresses or any other ID that can be used to implement strong security rules
- **Content:** e.g. attached file within an email, which can be directed to specific processing like anti-virus or content inspection
- **File metadata:** such as codec and bit rate used in a Flash video. These can be used for customer experience management, network security, etc.
- **Security related metadata:** e.g. tunneling on protocols such as dns or icmp.







The Greek philosopher Plato,  
Socratic dialogue, Republic:



*"The true creator is necessity,  
who is the mother of our  
invention."*



**Thank you**

[latrobe.edu.au](http://latrobe.edu.au)