The case for making South Africa a technology ingrained society

By Keitumetse Molamu (28 Nov 2019)

When you think of the future what do you imagine?

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What do you think they imagine?

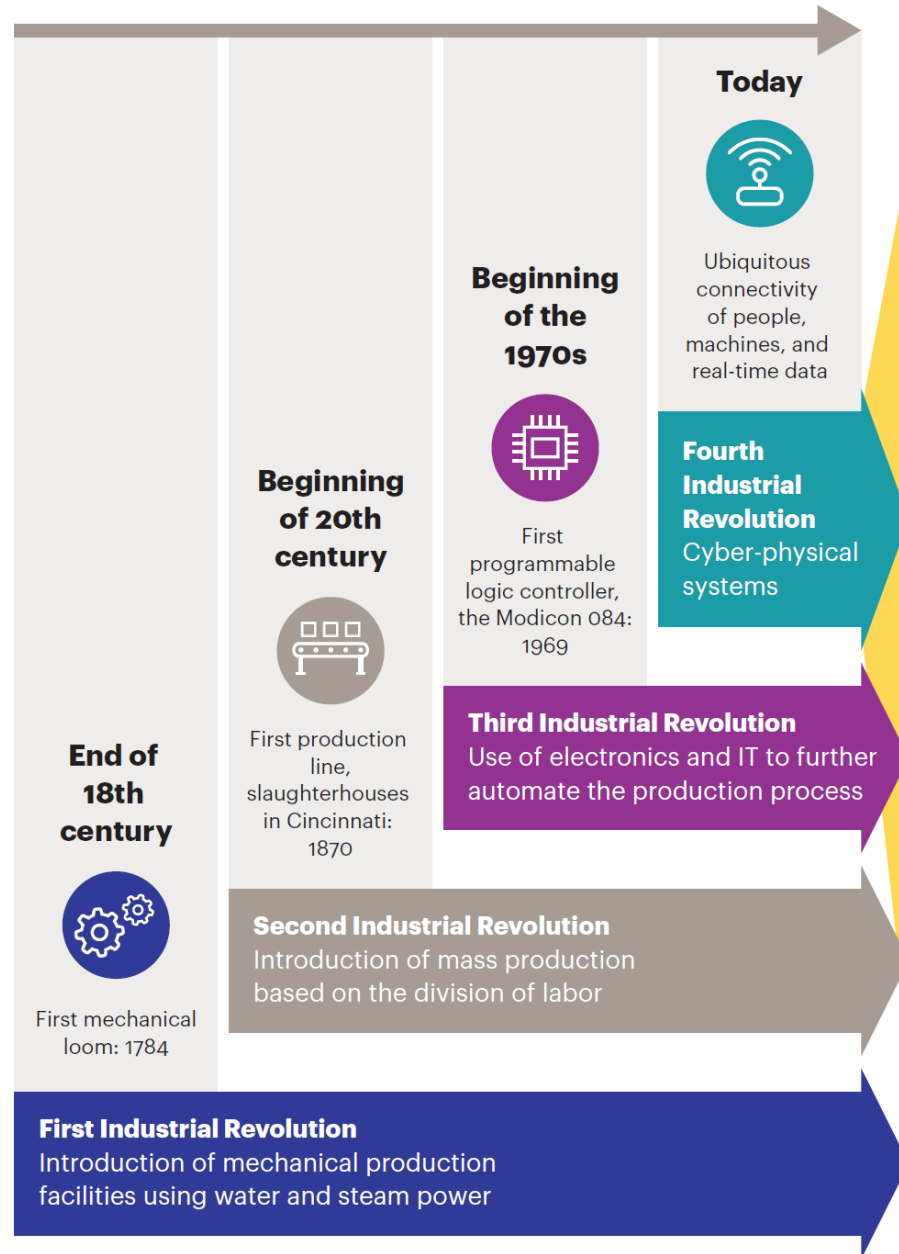Health Care

Water, Sanitation & Hygiene

Vocational Training

Access to Balanced Food
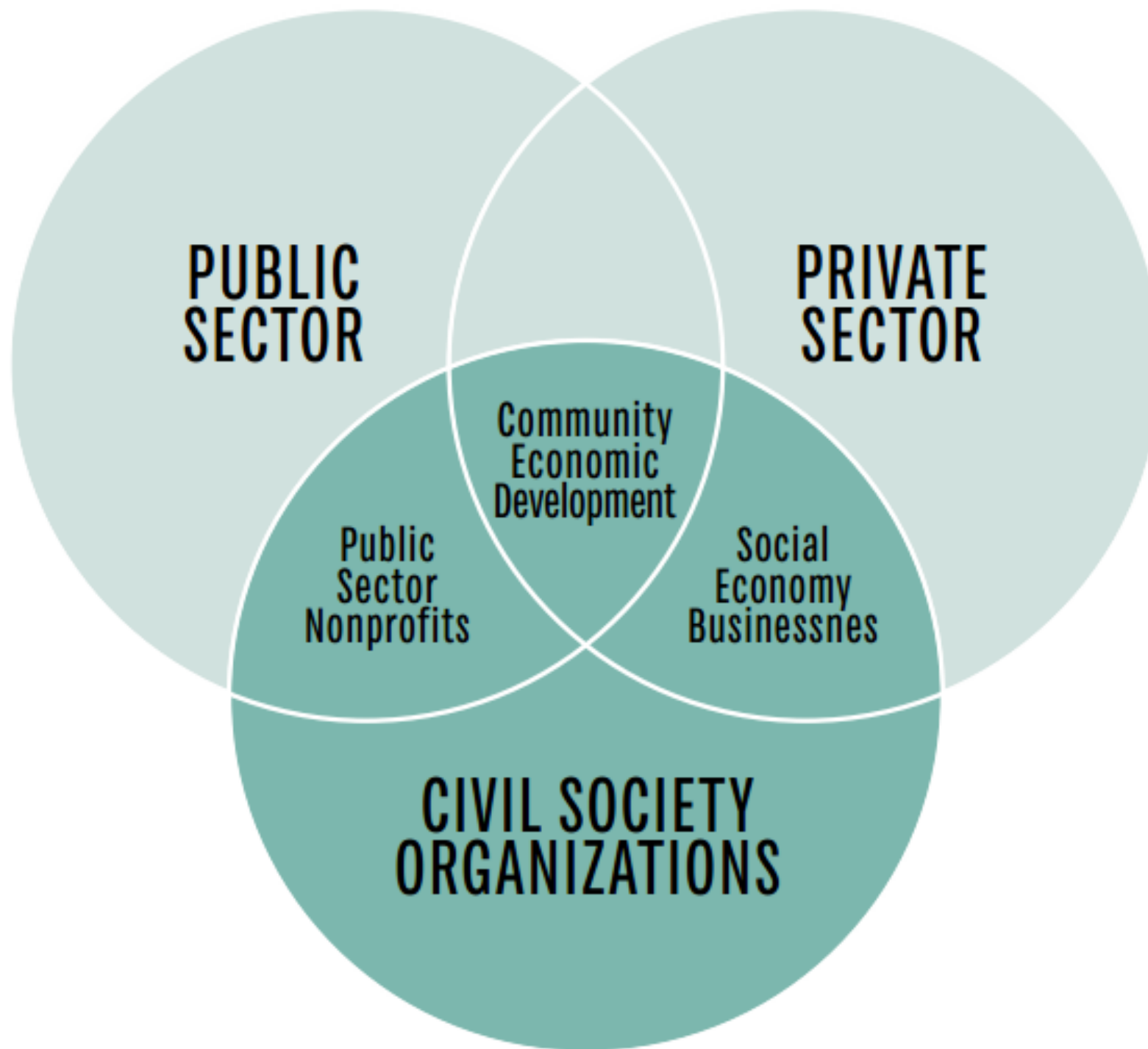
Timeline of industrial revolutions

Today

Ubiquitous connectivity of people, machines, and real-time data

Beginning of the 1970s

First programmable logic controller, the Modicon 084: 1969

Beginning of 20th century

First production line, slaughterhouses in Cincinnati: 1870

End of 18th century

First mechanical loom: 1784

Fourth Industrial Revolution
Cyber-physical systems

Third Industrial Revolution
Use of electronics and IT to further automate the production process

Second Industrial Revolution
Introduction of mass production based on the division of labor

First Industrial Revolution
Introduction of mechanical production facilities using water and steam power

Core technologies of the Fourth Industrial Revolution

Internet of Things

Interconnected computing devices embedded in everyday objects to gather information (passive) or translate commands into actions (active)

Artificial intelligence

Technology to process information, think, and make automated decisions based on current conditions and previous experiences (series of decisions plus consequences)

3D printing

The use of technology to make physical objects and parts from a digital model, reducing spare-part requirements and decreasing downtime and supply costs

Advanced robotics

Robotics technology supplemented by artificial intelligence or the Internet of Things to go beyond a set of pre-programmed actions and adapt to immediate and future operating conditions

Wearables, augmented reality, and virtual reality

The use of technology to enhance the functionality of everyday worn items, enhancing training experiences and enabling integration between man and machine processes
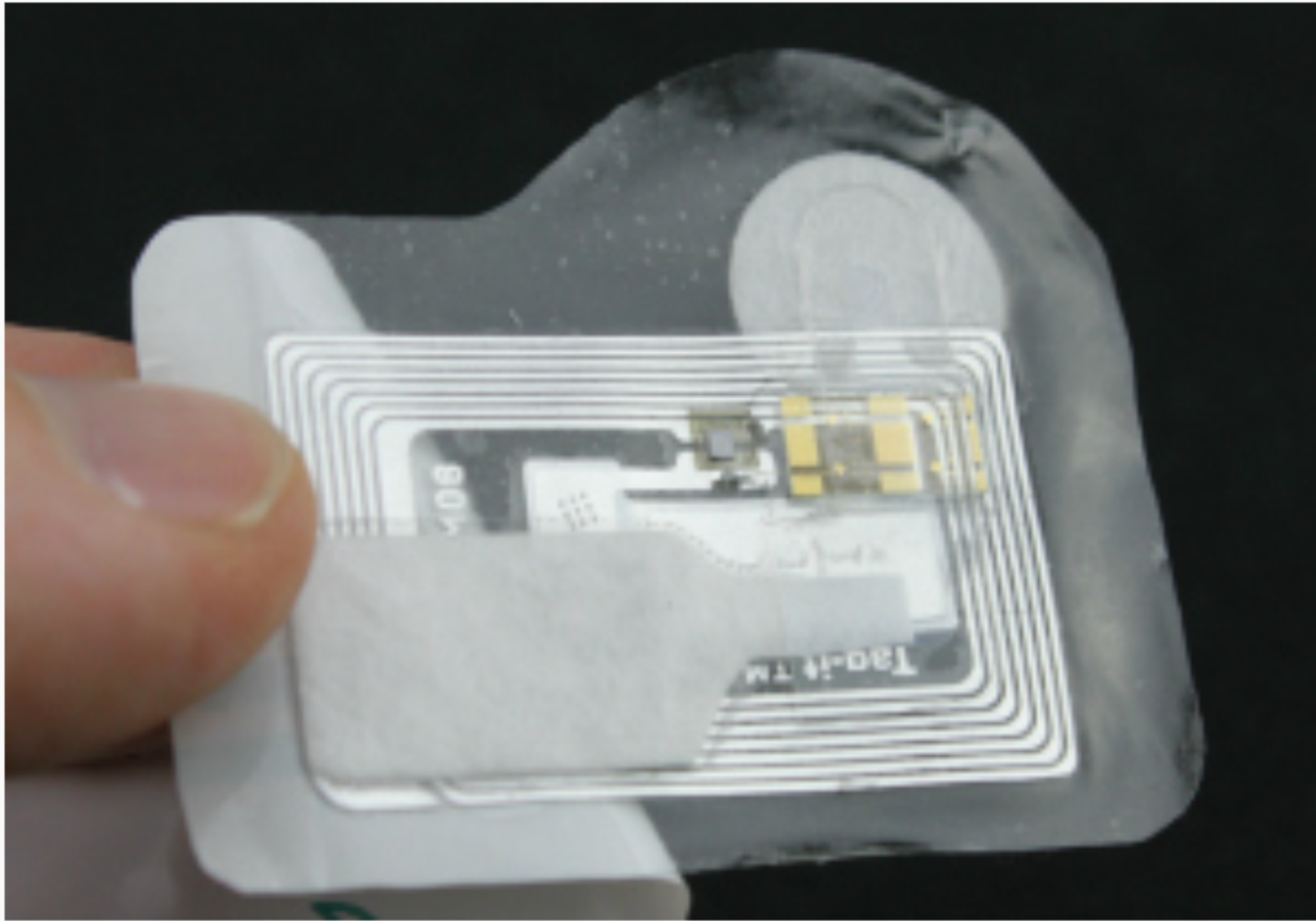
Source: A.T. Kearney analysis

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PUBLIC SECTOR

PRIVATE SECTOR

Community Economic Development

Public Sector Nonprofits

Social Economy Businessnes

CIVIL SOCIETY ORGANIZATIONS

SOCIAL ECONOMY

LifeStraw® Family 2.0 | by VESTERGAARD

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Hippo Rollers, a Hack4Water submission

Wireless medical sensor--Courtesy of GE
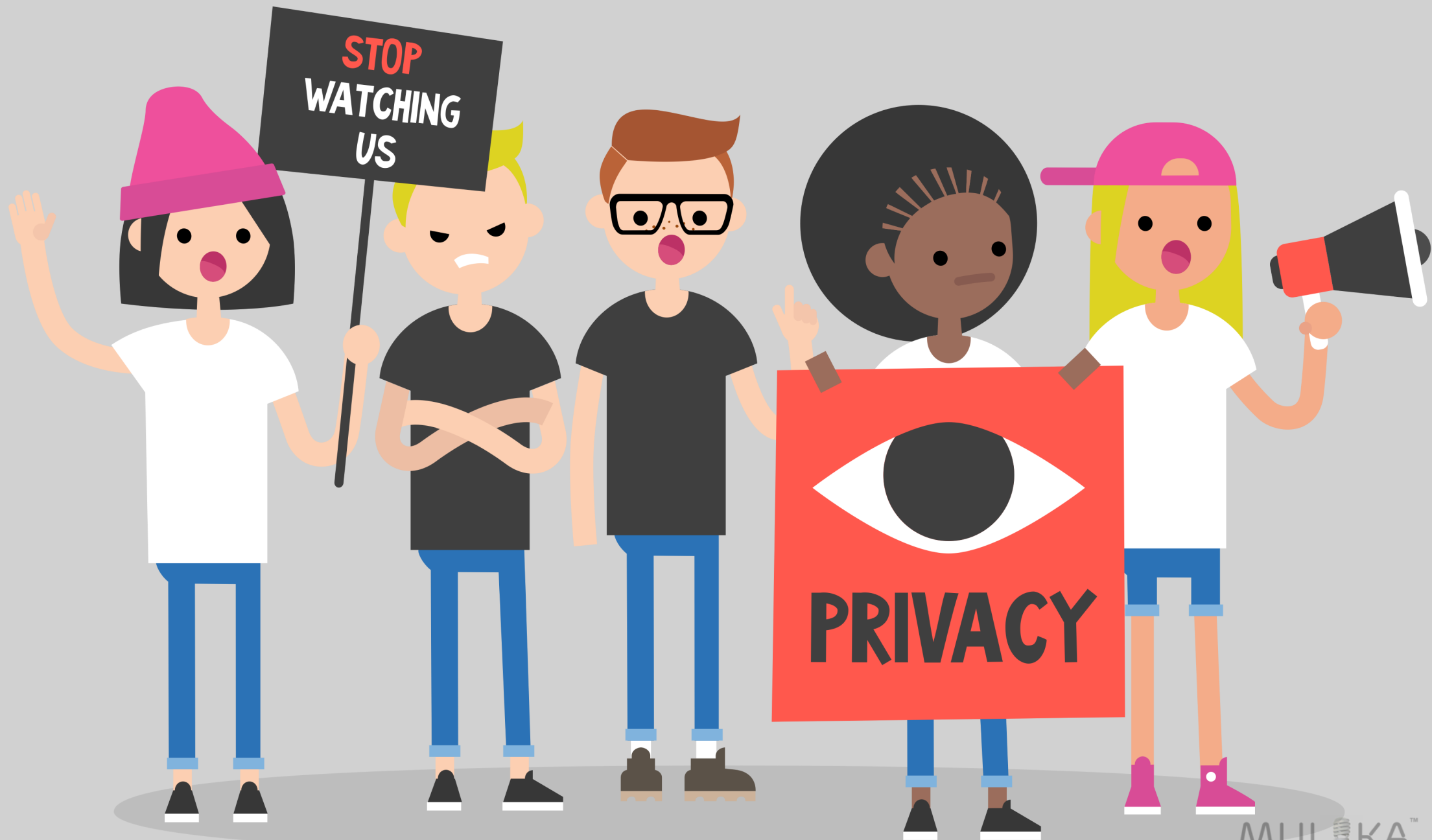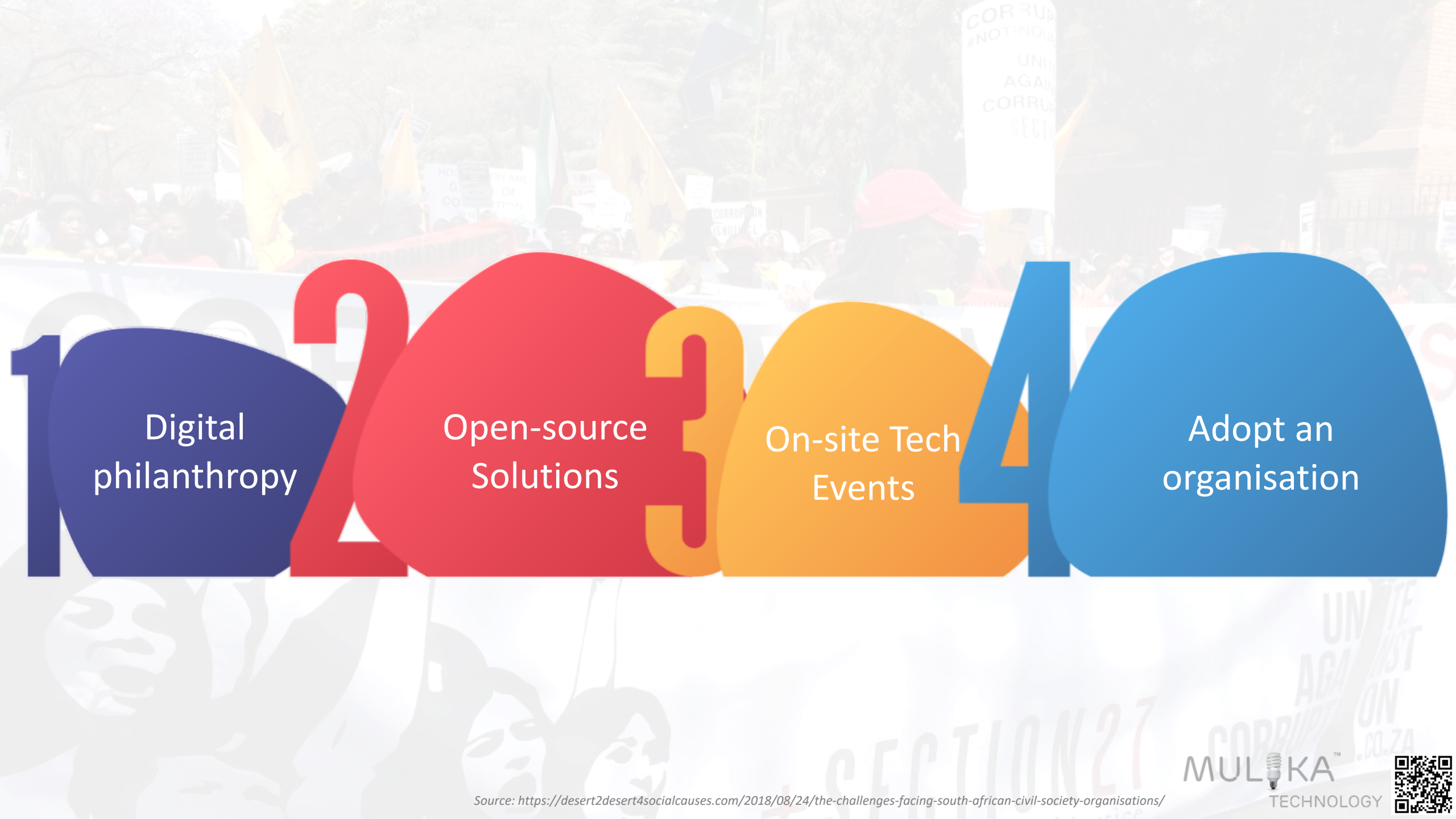
1 **Digital philanthropy**

2 **Open-source Solutions**

3 **On-site Tech Events**

4 **Adopt an organisation**

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Technology Innovation begins with human beings

Source: Michael Tompsett