



FSM5 and AfricaSan5
eKapa February 2019

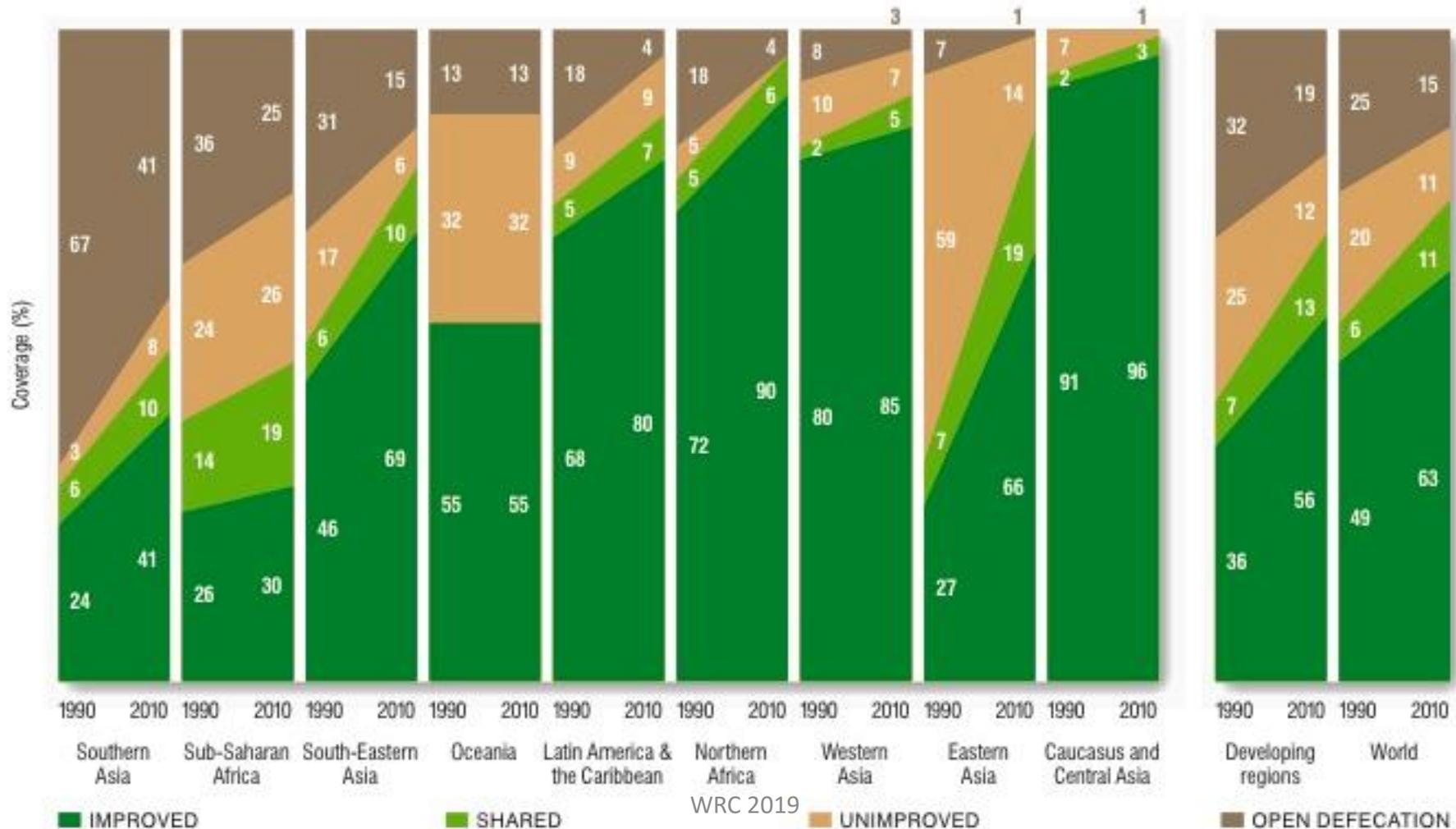
Creating the World's 1st Sanitation Unicorn

Dhesigen Naidoo

WRC South Africa

The World-wide scorecard is encouraging – in every region of the world.

Sanitation coverage is improving in almost every developing region



MAKING INDIA OPEN DEFECATION FREE

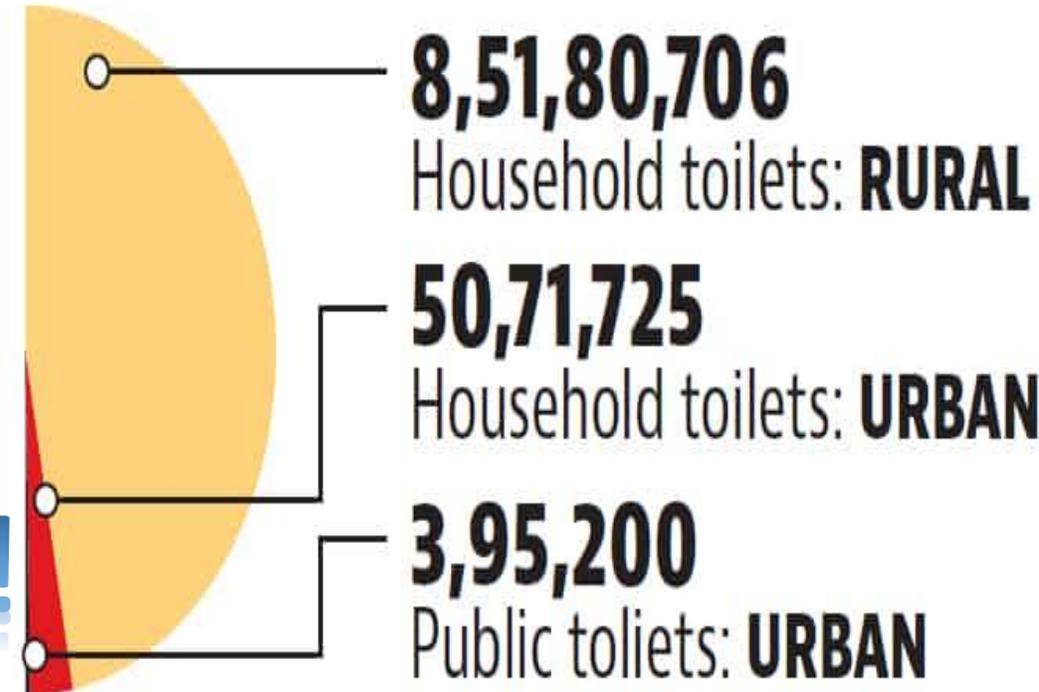


98% coverage

THE TIMES OF INDIA
**BUDGET
2019**

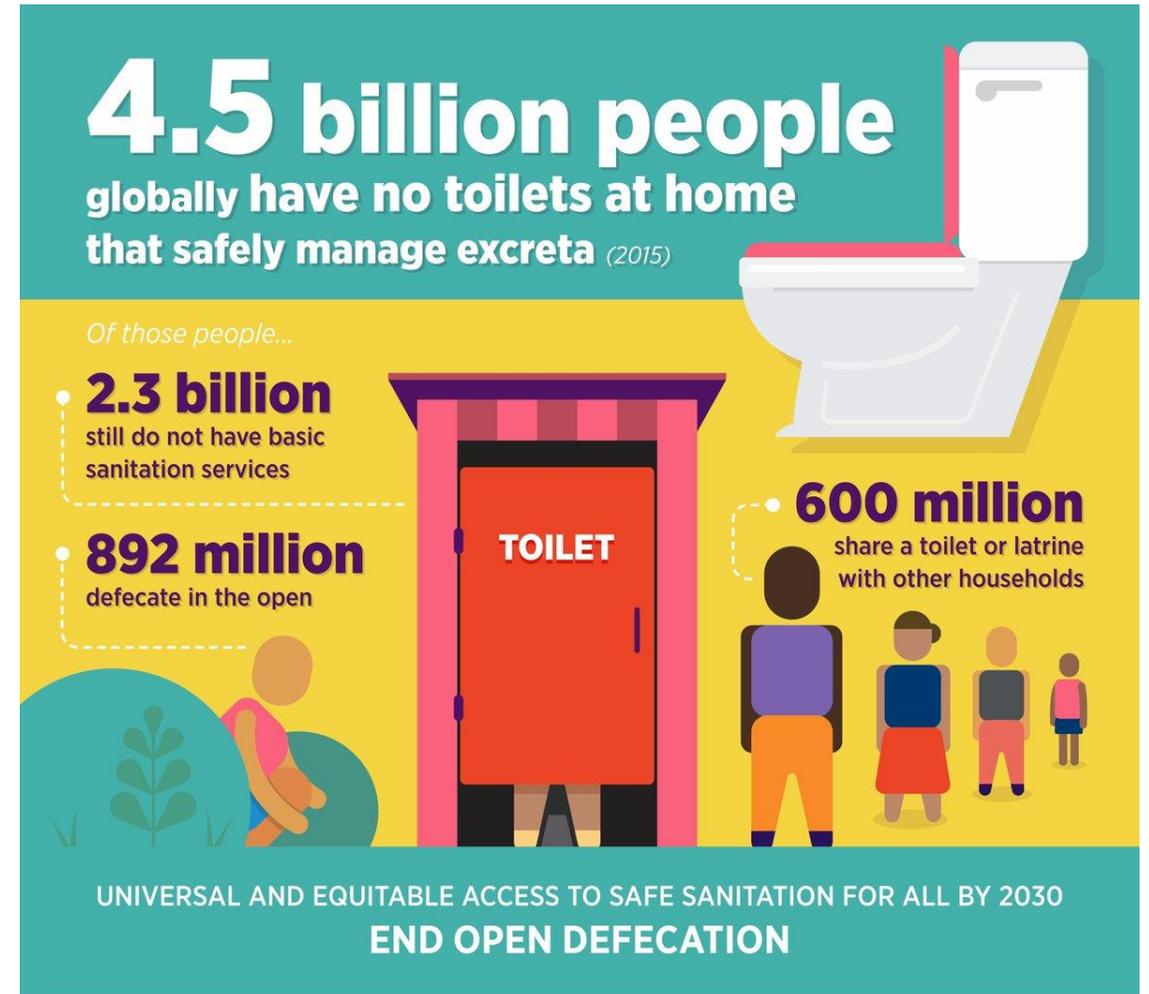


Toilets built



Some claims are ..Wow!!!

But, lets acknowledge our global **Services**, **Health** and **Dignity** DEFICITS!!



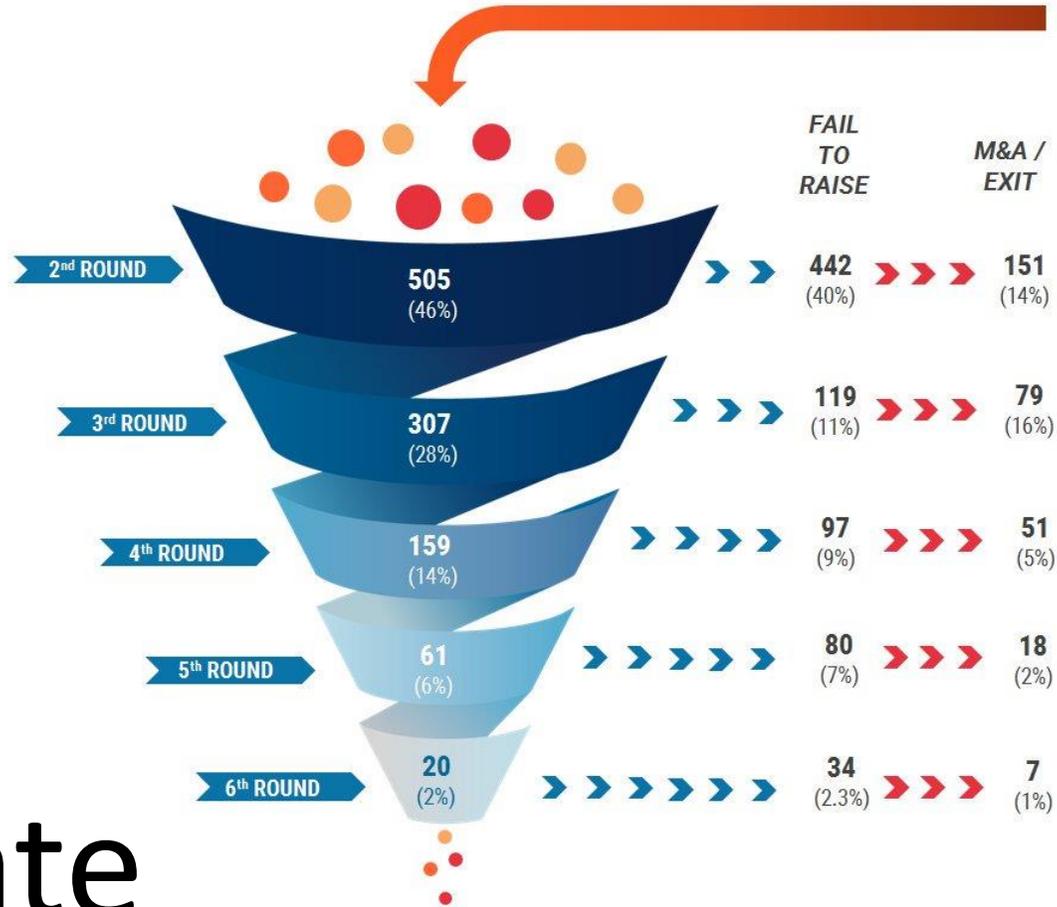
But, lets acknowledge our global **Services, Health and Dignity** DEFICITS!!



A unicorn is a startup that has a market worth of at least \$1Billion



1098 US SEED TECH COMPANIES



1% Success Rate

70%
DEAD / SELF-SUSTAINING

1% (10 companies)
REACHED UNICORN STATUS
INCLUDING...



WRC 2019

Note: All numbers based on cohort of companies that raised Seed in 2008, 2009 or 2010 and disclosed valuations only.



Sanitation – Is there a Business-Case?



**National
Industrial
Revolution**

**Town Water
Security**

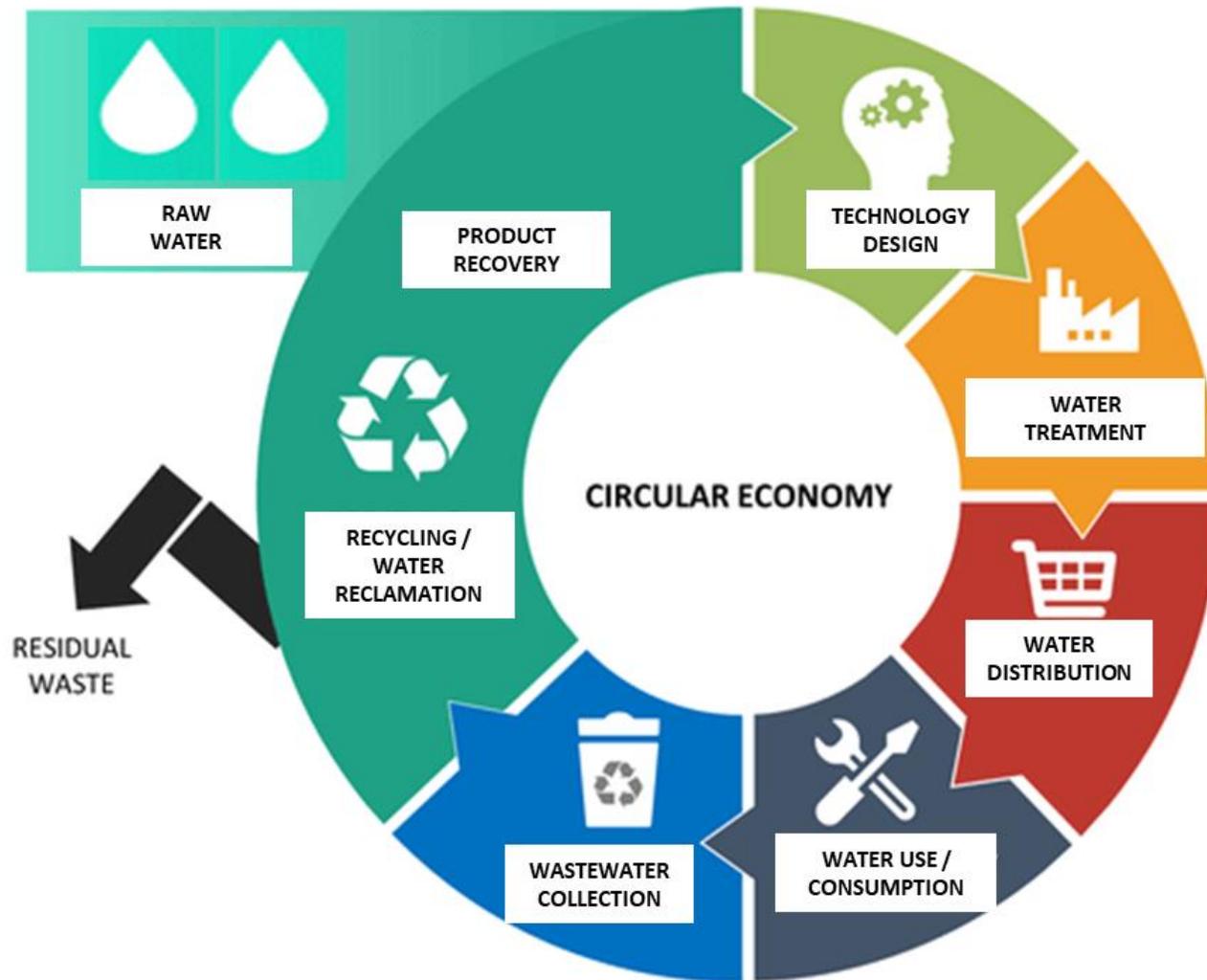
SaniTI

SAFE

New Sanitation Solutions

Low flush Application





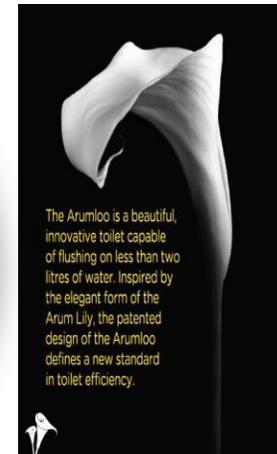
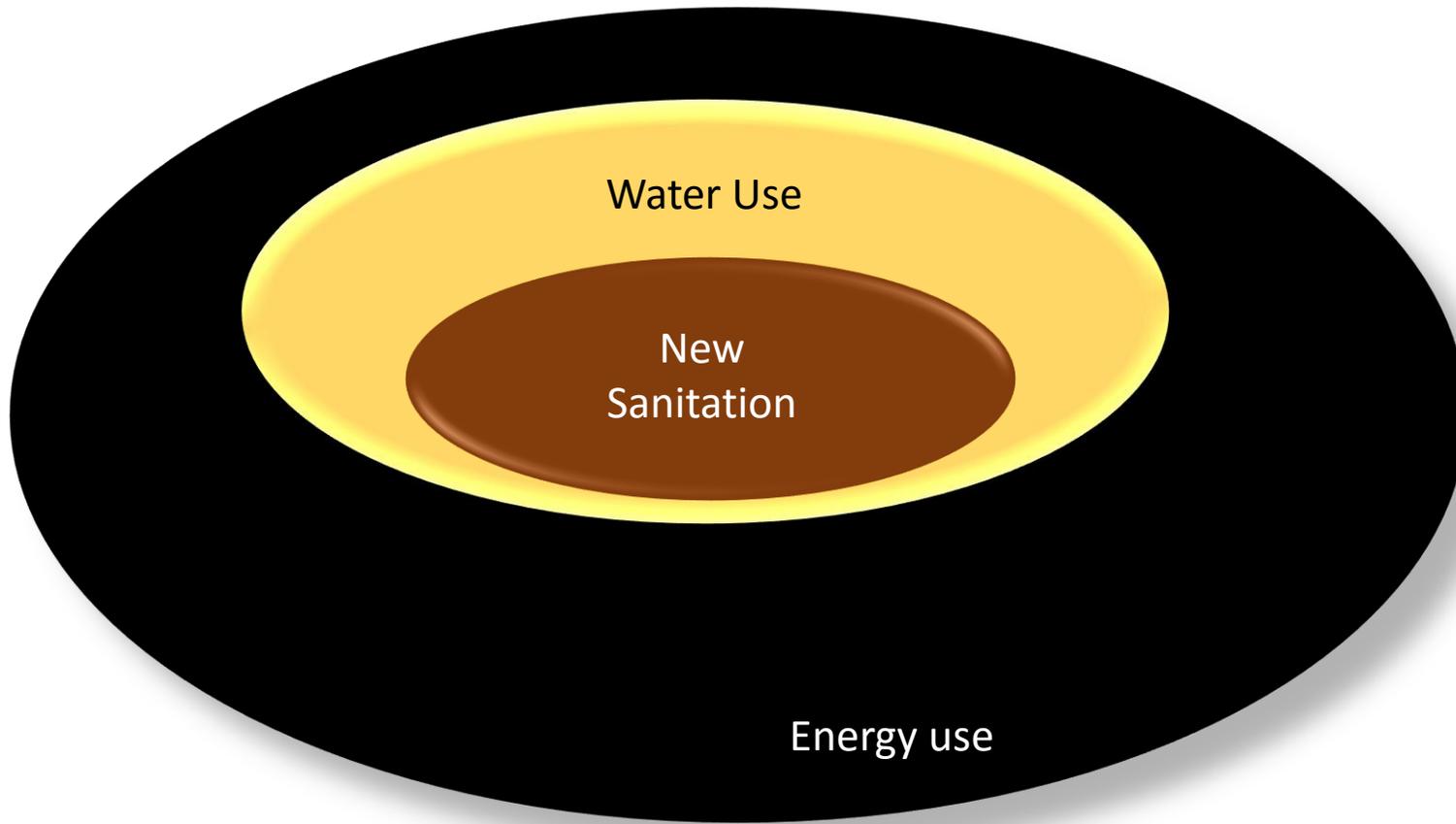
Circular approach - Water and wastewater business cycle

Circular Approach in the Water Sector

The Water and Sanitation sector has the option of an **“Industrial Economy Approach”**

- Capitalizing on new science, technology and innovation.
- A typical waste as feedstock paradigm with value add and beneficiation.
- Progressive waste minimization.
- Lower water use.
- Turbo-charger mechanism.

New Sanitation as the nucleus of the **New Circular Economy**



WATER SAVINGS

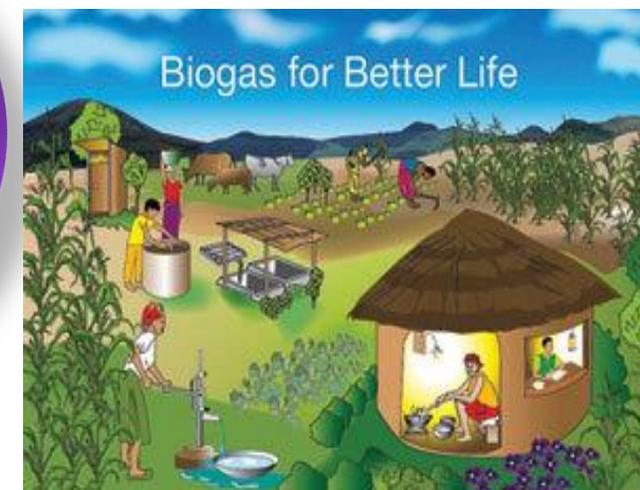
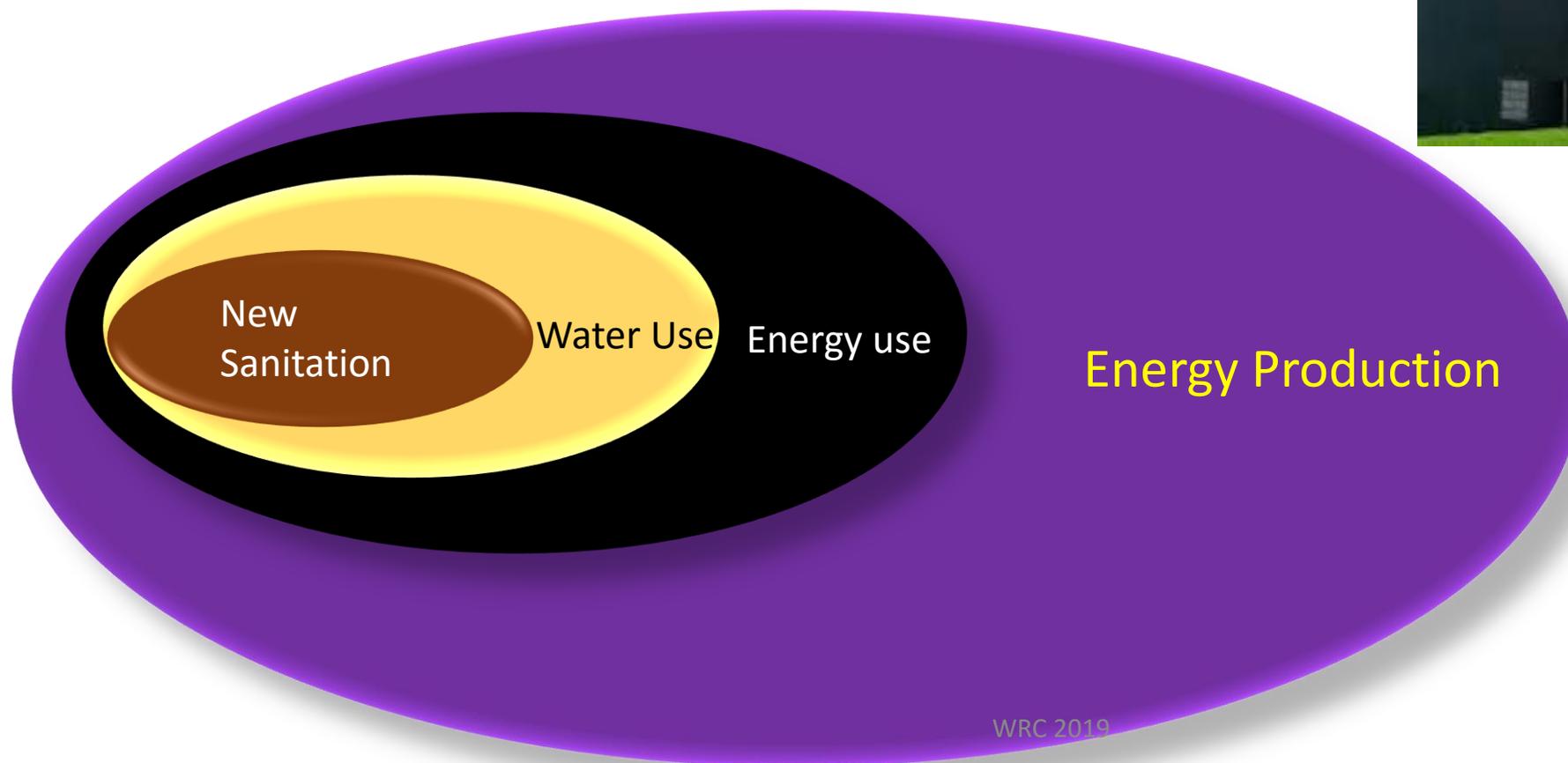
LOCATION	NO. OF PEOPLE	FLUSHES PER DAY	LITRES PER DAY	LITRES PER YEAR
Household	5	5	100	36,500
Office	20	3	240	60,000
School	50	2	400	82,000



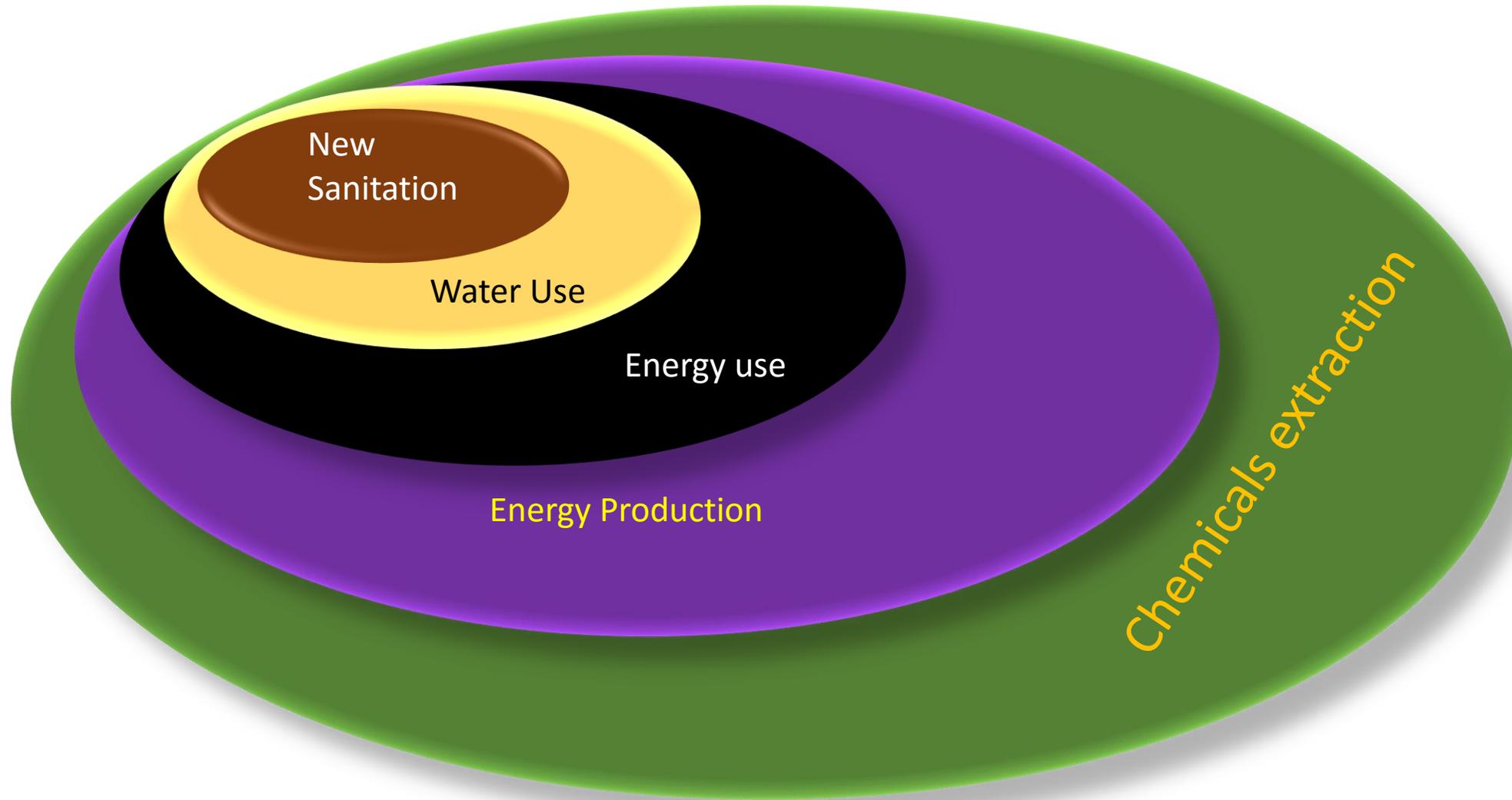
Arumloo features:

- Flushes on less than 2 litres (one third of normal flush volume)
- Superior quality ceramic toilet
- Developed in partnership with the Water Research Commission
- Flush with confidence (effective performance)
- Flush with peace of mind (reduced water footprint)
- The "greenest" low flush toilet on the market

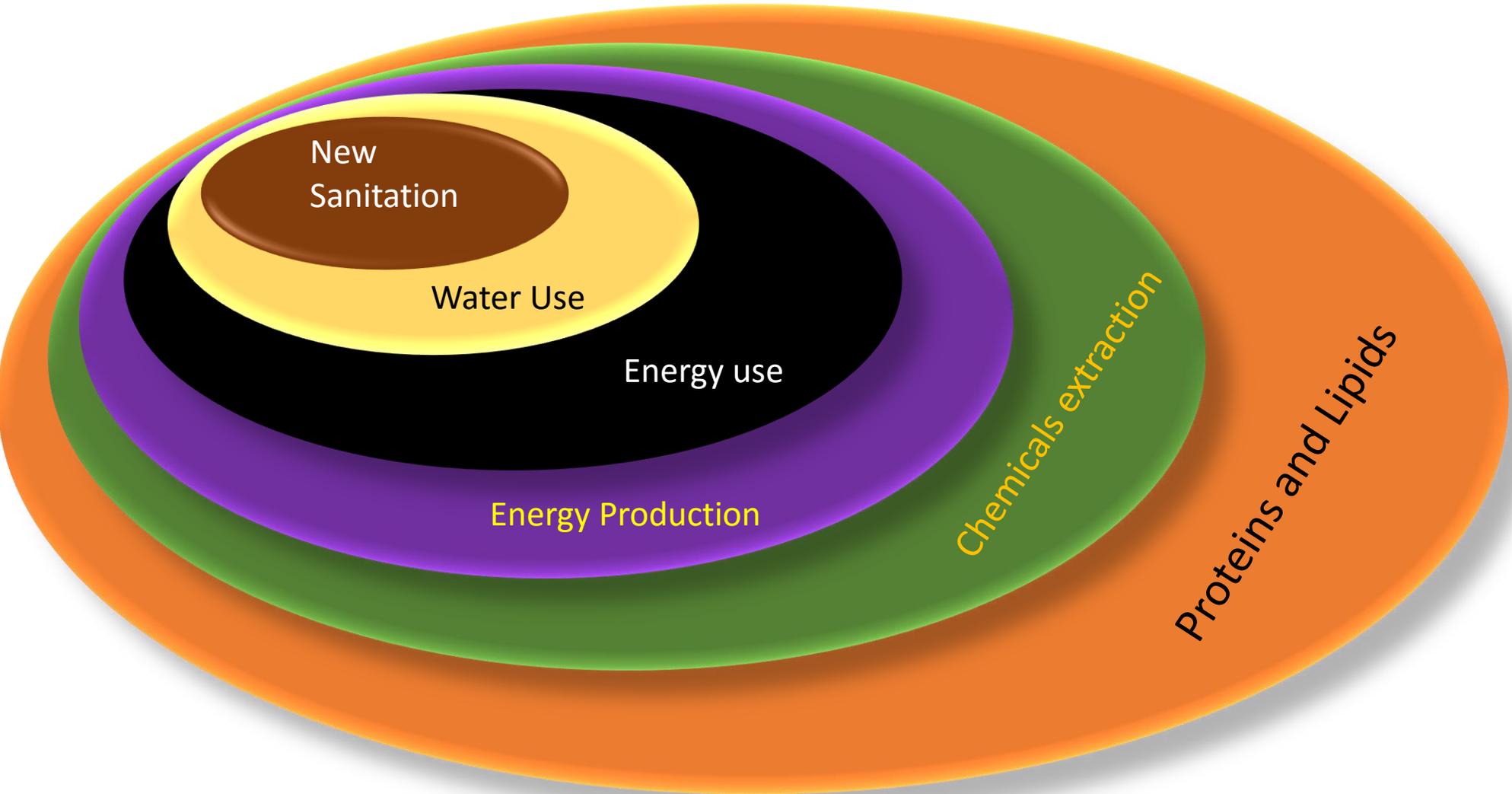
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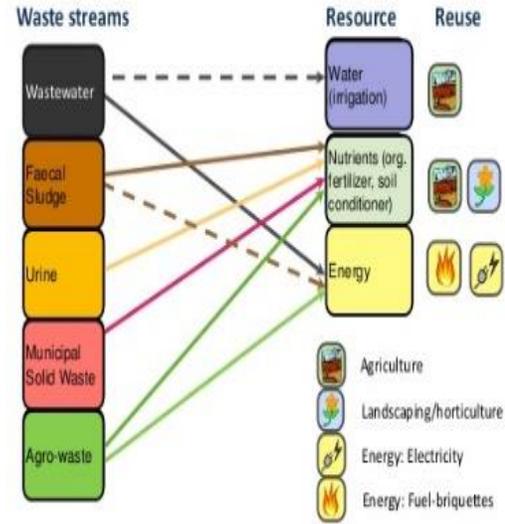
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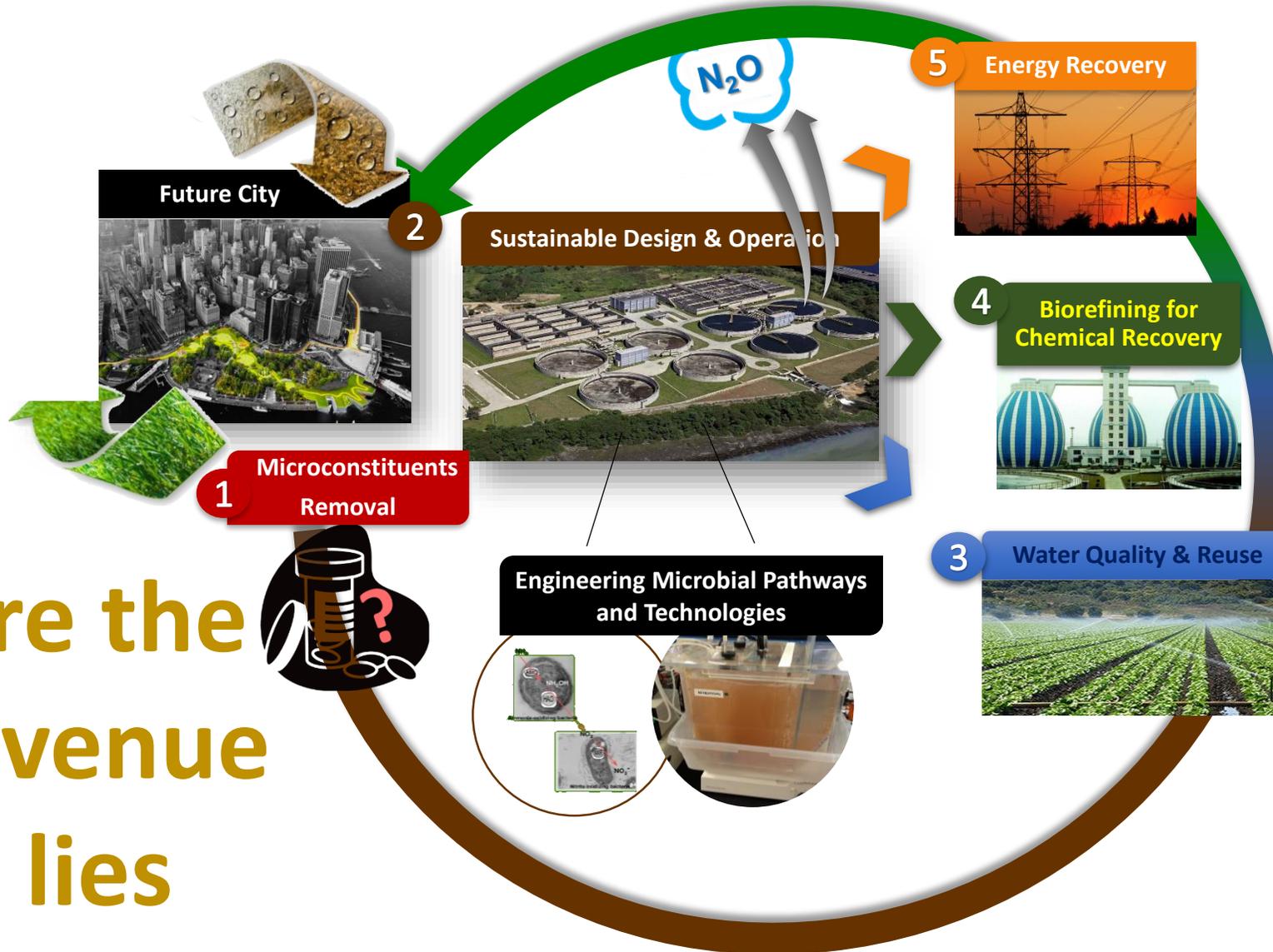
New Sanitation as the nucleus of the **New Circular Economy**



Changing waste challenge into an opportunity



6 Greenhouse Gas Management



Kartik Chandran

This is where the \$1 Billion Revenue potential lies

THERE'S GOLD IN THEM THAR PIPES

The new alchemy of human waste

In 1852, the Brothers
Conrad patented
Clothes' and household
Tales, containing many
of the well-known and
famous fairy tales, such
as Hansel and Gretel,
The Frog Prince, and the
fabled one of the long-
haired ogre. One
of those stories was
Alchemist's, who could
make gold from urine
with the assistance of an
invisible creature. What do
you think gold from "urine"
and toilet water have
in common with this
article?



DR SUDHIR PILLAY, research manager for Sanitation at the Water Research Commission in Pretoria, explains the link.



New gold seam

Water is the most abundant
resource on the planet. It is
essential for life and is a
key component of many
industries. However, it is
not always clean and safe
to drink. In fact, according
to the World Health
Organization, 80% of the
world's population lacks
access to clean water and
sanitation. This is a
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the spread of many
diseases, including
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malnutrition and
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children. Therefore,
improving water and
sanitation is a high
priority for many
governments and
international organizations.

Dr. Sudhir Pillay, research manager for Sanitation at the Water Research Commission in Pretoria, explains the link between human waste and water. He says that human waste is a major source of contamination in water bodies. This is because it contains a large number of bacteria, viruses, and other pathogens that can cause disease. In addition, it can also lead to the depletion of oxygen in water bodies, which can harm aquatic life. Therefore, it is important to properly manage human waste to protect water quality and public health.

BLACK GOLD: In the dark world of sewer pipes in Durban, South Africa, a new gold seam has been discovered. It is human waste, which is rich in nutrients and can be used to produce bio-fertilizers.

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Human "Waste"

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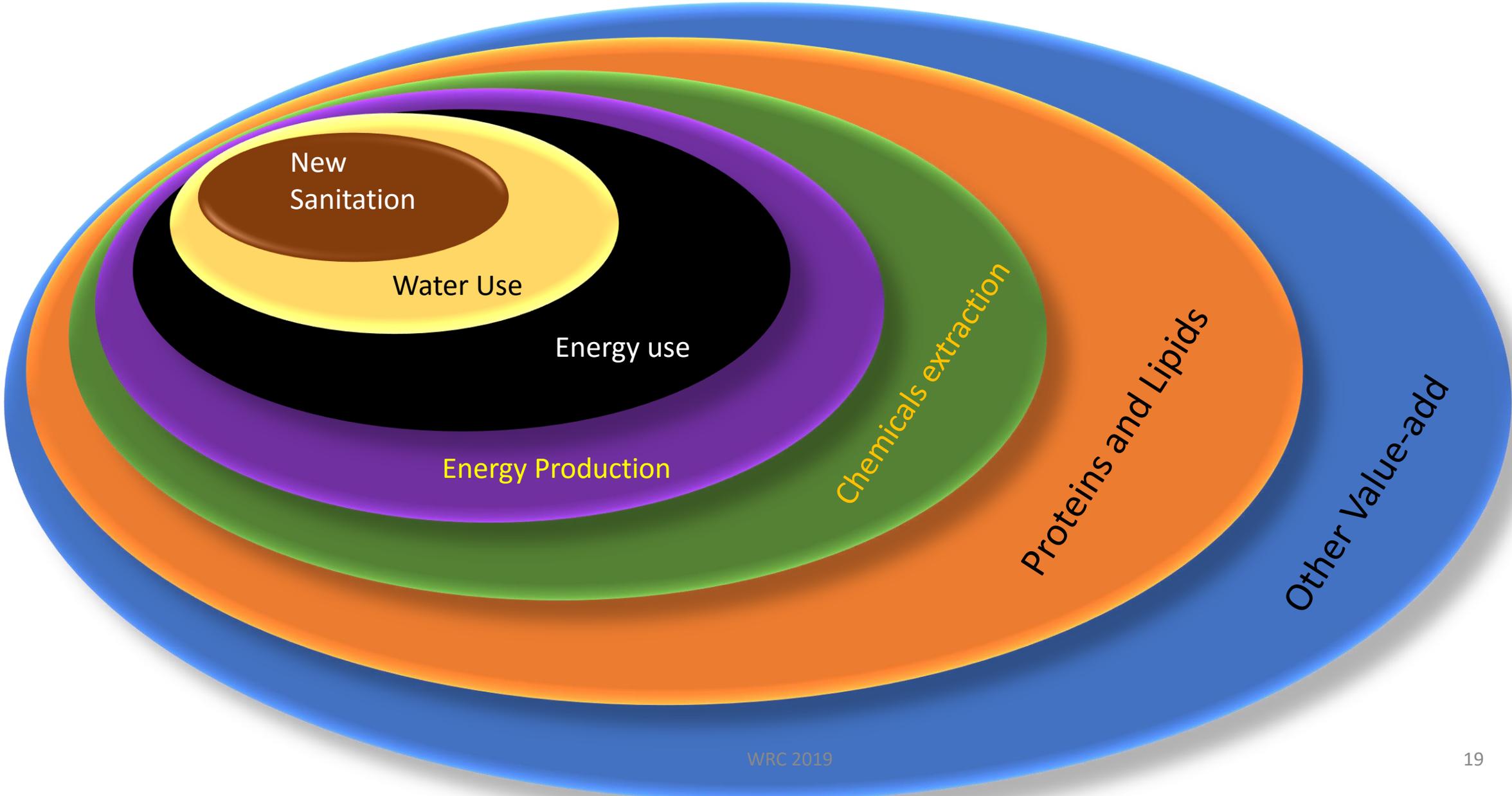
What if we run out?

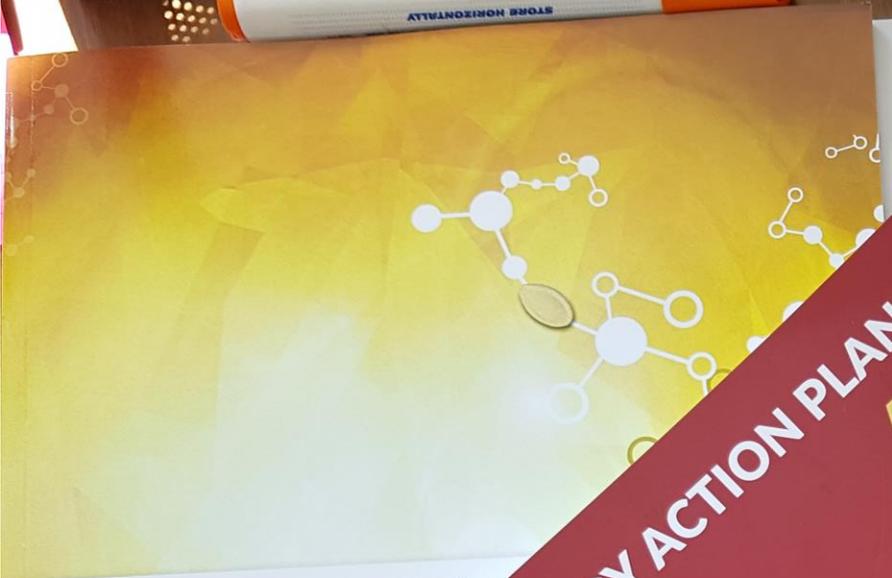
- At 400g/person/day and the human species at 7.25 billion folk
- Supplies a potential **2.9 million metric tons every day!!!**



- **It's a lot ofRaw material**

New Sanitation as the nucleus of the **New Circular Economy**





STAKEHOLDERS REPORT 2017/18 - 2019/20

INDUSTRIAL POLICY ACTION PLAN 2017/18 - 2019/20

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Economic sectors, employment and infrastructure development cluster

PART 1: A BRIEF OVERVIEW

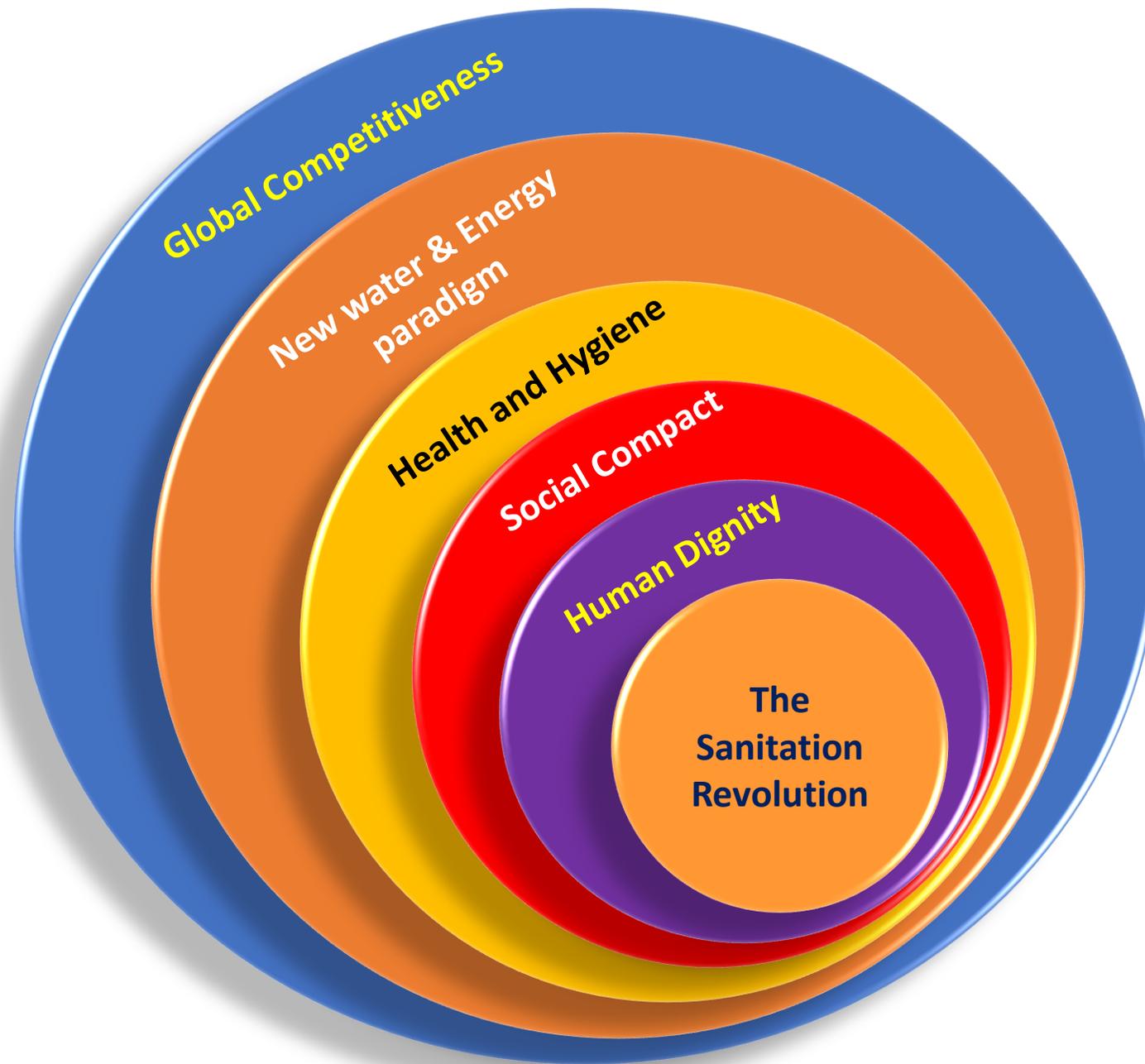
IPAP Achievement Highlights 2016-17
Leading challenges, focus areas and action themes 2017-20
Driving innovation and technology / preparing for the 4th Industrial Revolution
Economic transformation: the core issues
Inclusive growth, empowerment, diversification, localisation
Manufacture, export & labour-intensive economic sectors



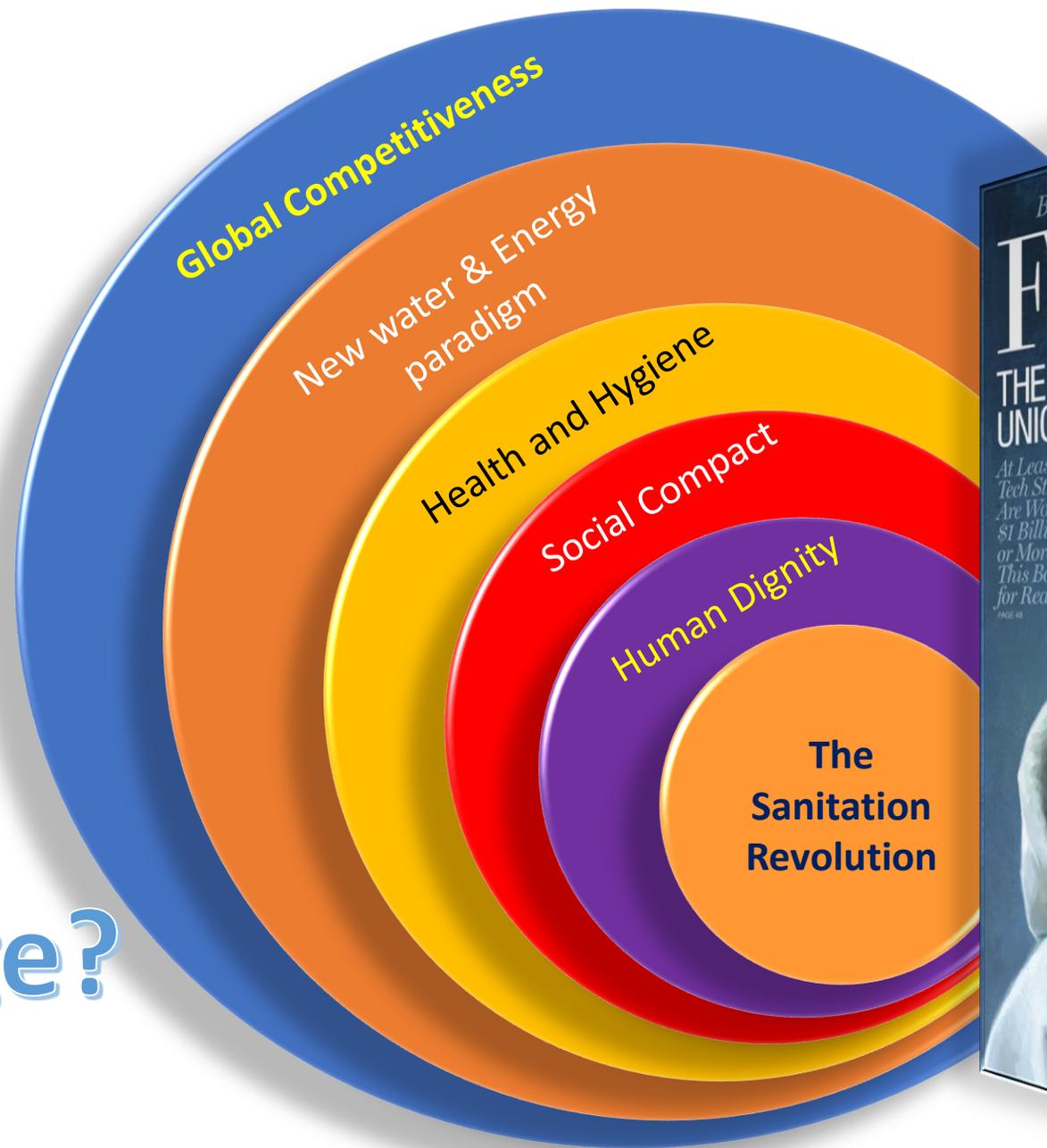
Industrial policy in a turbulent world

DAY 3 Wednesday, 2 Aug
'Made in Afrika' Day

07:00 - 08:30	REGISTRATION
	Programme Director: Nigel Gwynne-Evans, Chief Director Africa Industrialisation, the dti (SA)
08:30 - 09:00	WELCOME REMARKS
	Dr Berty Chaura, Acting Director, FANR, SADC Secretariat
09:00 - 09:30	KEYNOTE
	Dr Eve Gadzikwa, President of the Regional Standardization Organization
	Repositioning the SADC Region via Global Value Chains
09:30 - 11:00	SUCCESSFUL MODELS
	Supporting local manufacturers, entrepreneurs in regional trade
	Moderator: Lesley Wentworth
	Case Study: Payments in SADC - Maxine Hlaba, Head of Trade Association
	Case Study: Implications for SADC - Siphemiso Mtanga, TIPS
	Case Study: Overcome barriers to entry, (Group)
	Case Study: Industrialization



Are you ready
To take
on the
Challenge?



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Thank You