

A reader received an e-mail notice from a supplier earlier this month:

“We will unfortunately have a power down between 09:00 and 15:30 on 9 December 2004. We apologise for any incontinence and will try to respond to any e-mails you might send during this time ASAP.”

We wonder if Eskom has considered this spin to the disruption power outages cause.



“Water service delivery –

the weakest link!”



Presentation to
**“Water and Sanitation
Conference, 2009”**

Kevin Wall, CSIR

Cape Town, 27 May 2009



Sequence of presentation:

- **Integrated delivery process – weakest link – report card**
- **Focus on skills**
- **Focus on incentives**
- **To conclude**



Chapter 1:

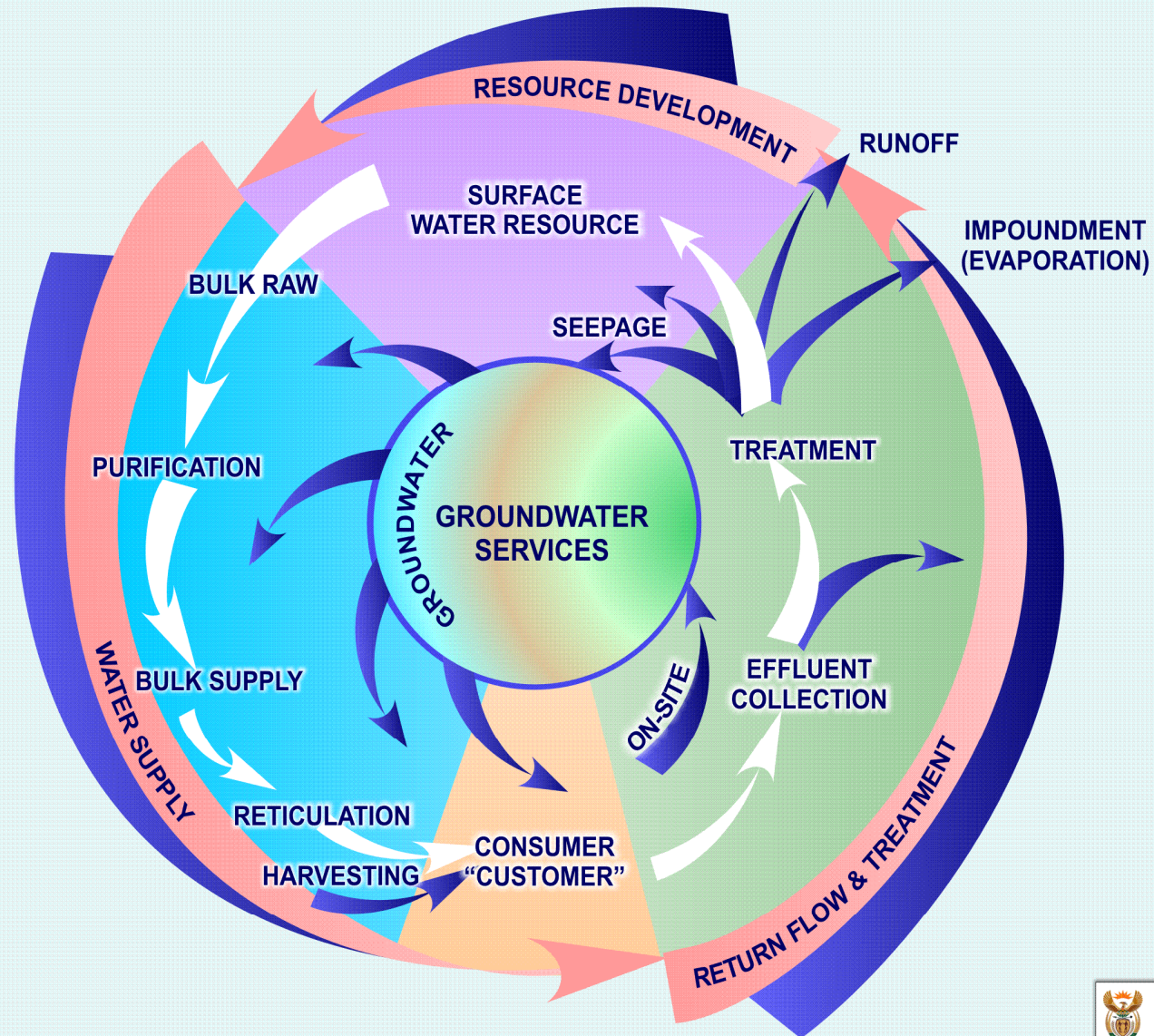
- **Services delivery is a process and an integrated system. Both are only as strong as their weakest links.**
- What is delivery?
- Findings that the weakest generic links are
.....



The “weakest link”

- Providing effective service delivery requires a combination of management, financial, engineering, economics and social practices and techniques within a robust framework and management plan.
- The process can be viewed as a chain of events – and this chain is at any moment in time only as strong as its weakest link at the time.

WATER SERVICES CYCLE



- An integrated system

Water and the poverty trap

Spread of
HIV/AIDS

Poor level of
water services

High cost for
provision of
household water
and sanitation

Loss of
dignity

POOR WATER SUPPLY **POOR SANITATION**

Disease and
sickness

Skills
deficiencies

POVERTY

Limited employment
opportunities

Education
problems

The poverty trap

The Eastern Cape is still one of the most economically depressed parts of the country

THE POVERTY TRAP

SUNDAY TIMES 10 MAY 2009

CHARLES MOLELE

AS the bitter cold sets in, spare a thought for 57-year-old Nokomanishi Ngam of Nqamakwe, a village in the rural hinterland of the former Transkei.

An asthmatic, Ngam coughs frequently as she relates her story of life in the Eastern Cape.

Her family is indigent and, for most of the month, goes to sleep without having had a proper nutritious meal, something that affects the matriarch's health. Ngam said the family only gathered for a decent meal when she drew a child support grant at a bank in the nearby town of Butterworth.

"Life is tough here. We survive on grants from our children," said Ngam.

"Our village is underdeveloped. There are no toilets, running water or electricity. When it rains, our bridge is broken and we are completely cut off from the rest of the world for weeks."

Ngam's is a familiar tale, heard throughout the province — from the dangerous, high-density township of Motherwell in the Nelson Mandela Bay Metro to the far-flung rural village of Bizana in Eastern Pondoland.

The Eastern Cape — the birthplace of ANC struggle icons such as Nelson Mandela, Oliver Tambo and Chris Hani — is one of the most economically depressed parts of the country.

According to a recent end-of-term report by the provincial administration, seven out of 10 people in the province's six districts and one metro — Alfred Nzo, O R Tambo, Chris Hani, Ukhahlamba, Amathole, Cacadu and the Nelson Mandela Bay Metro — live in grinding poverty.

The allocation of welfare grants has increased dramatically, an estimated 2.5 million of the province's 6.9 million people depend wholly on social and child grants to survive.

Unemployment is rife at 27.4%. More than 60 000 people are being treated for HIV/Aids. Since 2005, TB cases have increased by 30%.

The province's maternal mortality rate has increased sharply, from 120 deaths per 100 000 in 2000 to 199 deaths per 100 000 in 2007.

The problems of a civil service in transformation are immense, while corruption and low morale remain huge challenges for the ruling ANC administration.

More than 400 cases of alleged corruption have been reported since 2004.

Infrastructure in many districts is crumbling. Roads are riddled with potholes, rubbish lies scattered about and power cuts are the order of the day. Some villages are hard to reach due to poor roads.

At Mthatha, people complained bitterly about regular power and water cuts.

'People of the Eastern Cape are worse off than they were prior to 1994 ... and the situation is deteriorating'

On July 31 2008, former premier Mbulelo Sogoni announced the implementation of a provincial service delivery acceleration plan aimed at "enhancing coherence within government and public institutions to deliver on the promise of a better life for all".

But the lives of the people remain unchanged.

Despite such an appalling record of service delivery, the ANC was returned to power in the province last month, winning 68.82% of the vote.

But its support nose-dived by 10% compared with the 79% the party attained in 2004.

COPE, the new provincial opposition, has vowed to redress poor service de-

livery in the province. COPE provincial leader Mkhuseleli Jack said his party would hold the ANC to its election promises.

Jack said COPE would work with the ANC to boost infrastructural development, abolish "mud schools" and better manage feeding schemes.

Former Eastern Cape DA leader Athol Trollip — named this week as the party's leader in the national assembly — said the situation in the province had reached a "crisis".

"It is almost inexplicable that the people of the province would vote in such high numbers for the government directly responsible for their plight," said Trollip.

"People of the Eastern Cape are worse off than they were prior to 1994 ... and the situation is deteriorating even further."

"But we believe that, at local government level, people are going to be less tolerant as we approach 2011, and are going to start engaging in service delivery protests."

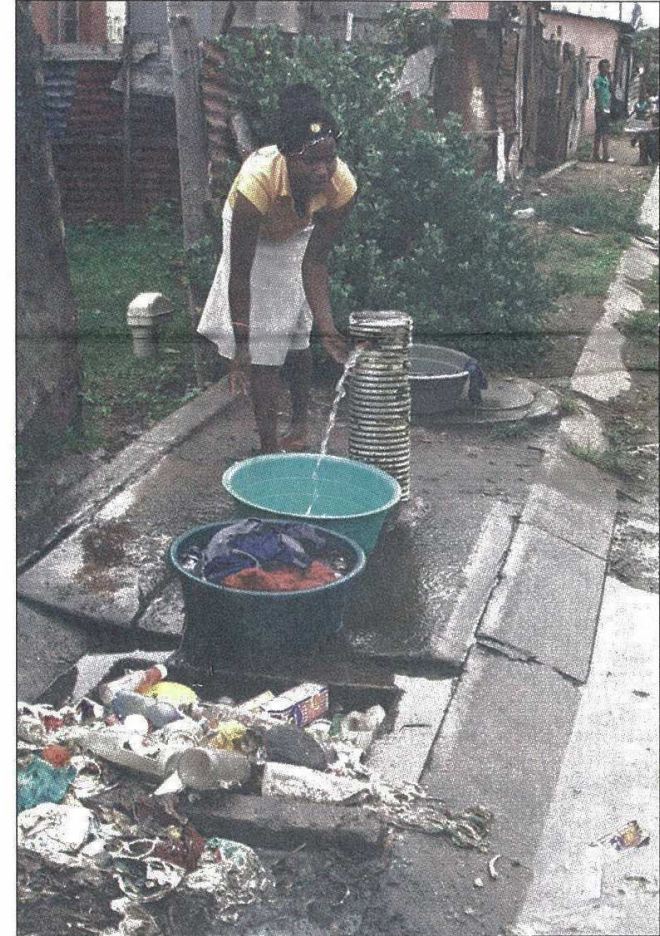
United Democratic Movement leader Bantu Holomisa blamed the ANC's macroeconomic policies for the high unemployment rate and for the fact that some factories in the province had closed.

Holomisa said that the ANC had destroyed thousands of public works jobs in the province by giving construction tenders to "cronies".

ANC provincial spokesman Mcebisi Jonas said the provincial government would broaden the social safety net in its bid to alleviate poverty.

The party also planned to prioritise health, education and rural development programmes earmarked for social upliftment.

But, unless the ANC practises what it preaches in the Eastern Cape, the voters may not be so forgiving next time around and — come 2014 — the ruling party may rue its inability to address problems affecting indigent families such as Ngam's. — molelec@sunday-times.co.za



MUCKED UP: Service delivery in Duncan Village, East London, is dire — as in many parts of the poverty-stricken Eastern Cape
Picture: GARY HORLOR

The poverty trap – Eastern Cape

Eastern Cape Provincial “End of Term” Report (2009):

- 7 out of 10 people in Eastern Cape live in poverty
- 2.5 million out of 6 million people wholly depend on social and child grants
- 27.4% unemployment
- Only 60,000 people being treated for HIV/AIDS (1%)
- TB cases have increased by 30% since 2005
- For every 100,000 births, the maternal mortality rate has increased from 120 (2000) to 199 (2007)
- Government is suffering from a skills shortage and corruption is hindering delivery processes.

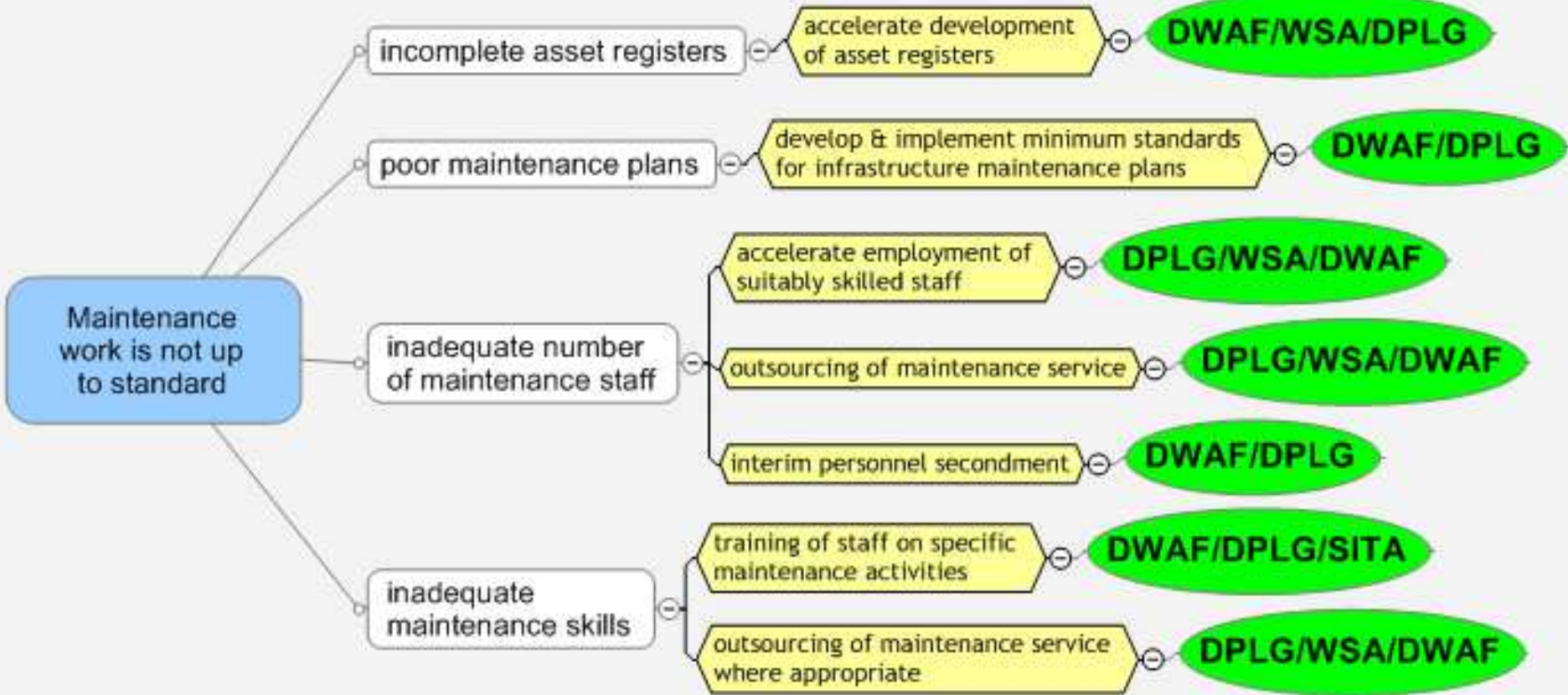
Example of solutions finding

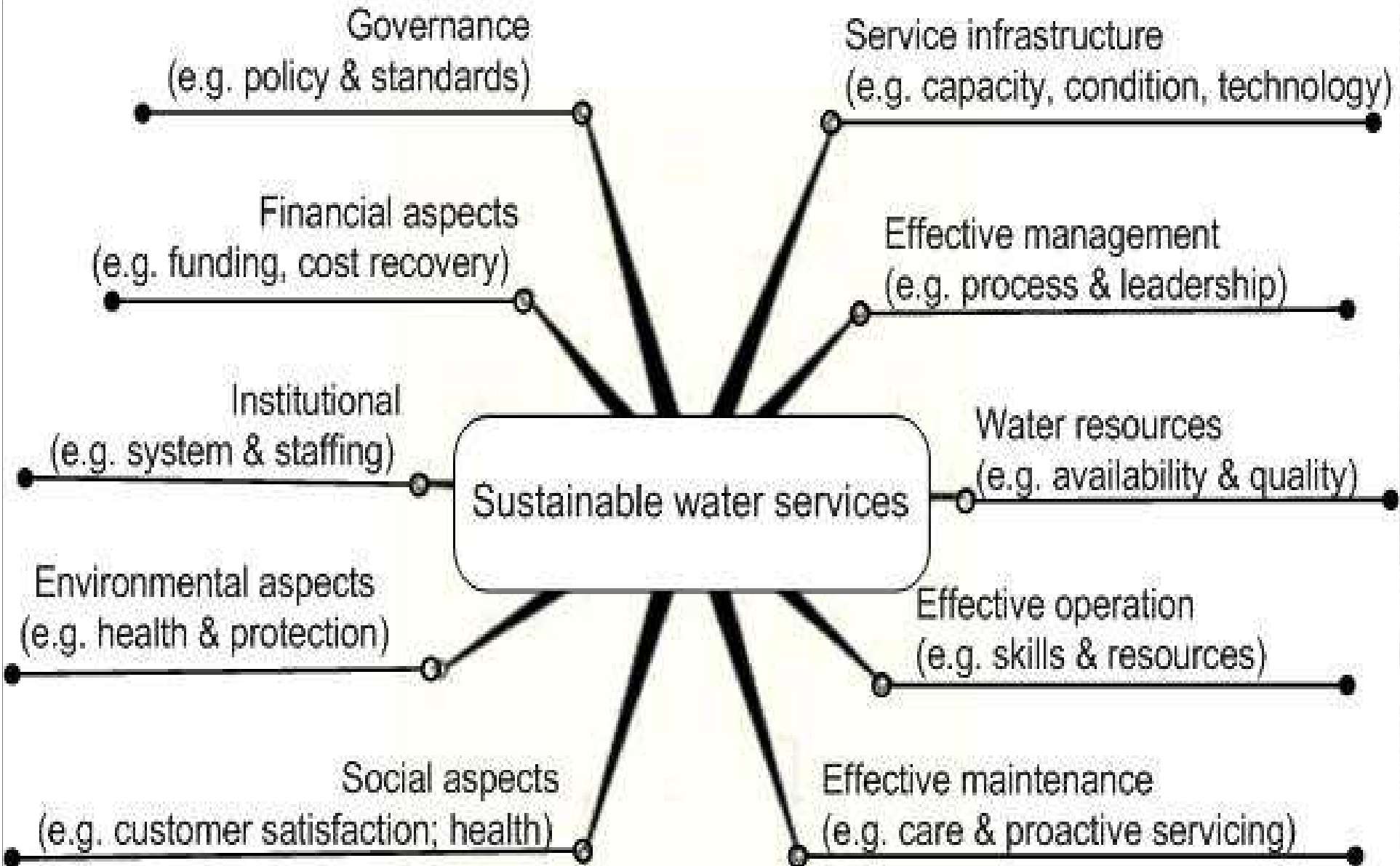
Problem

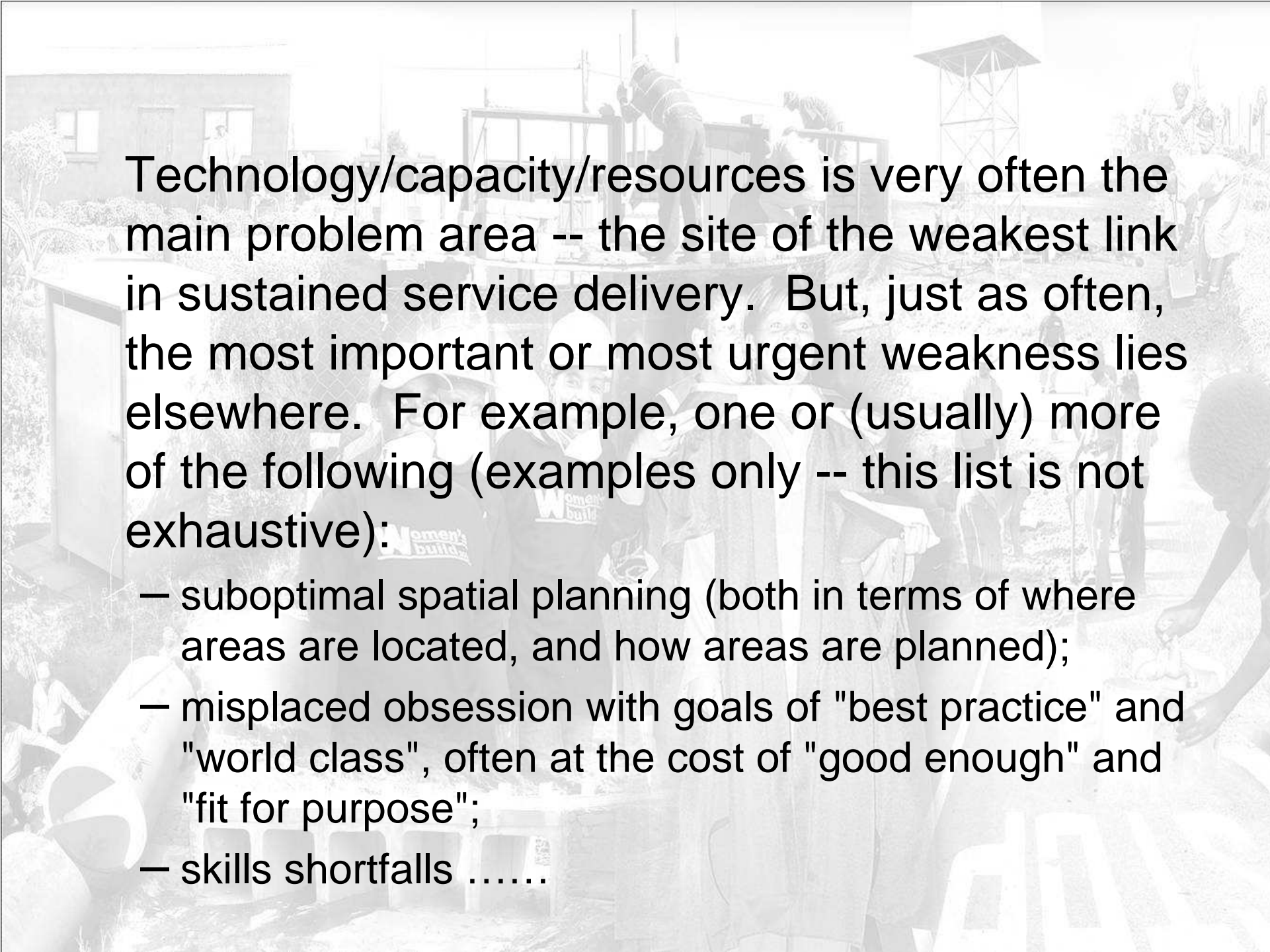
Cause of problem

Potential solution

Roleplayers

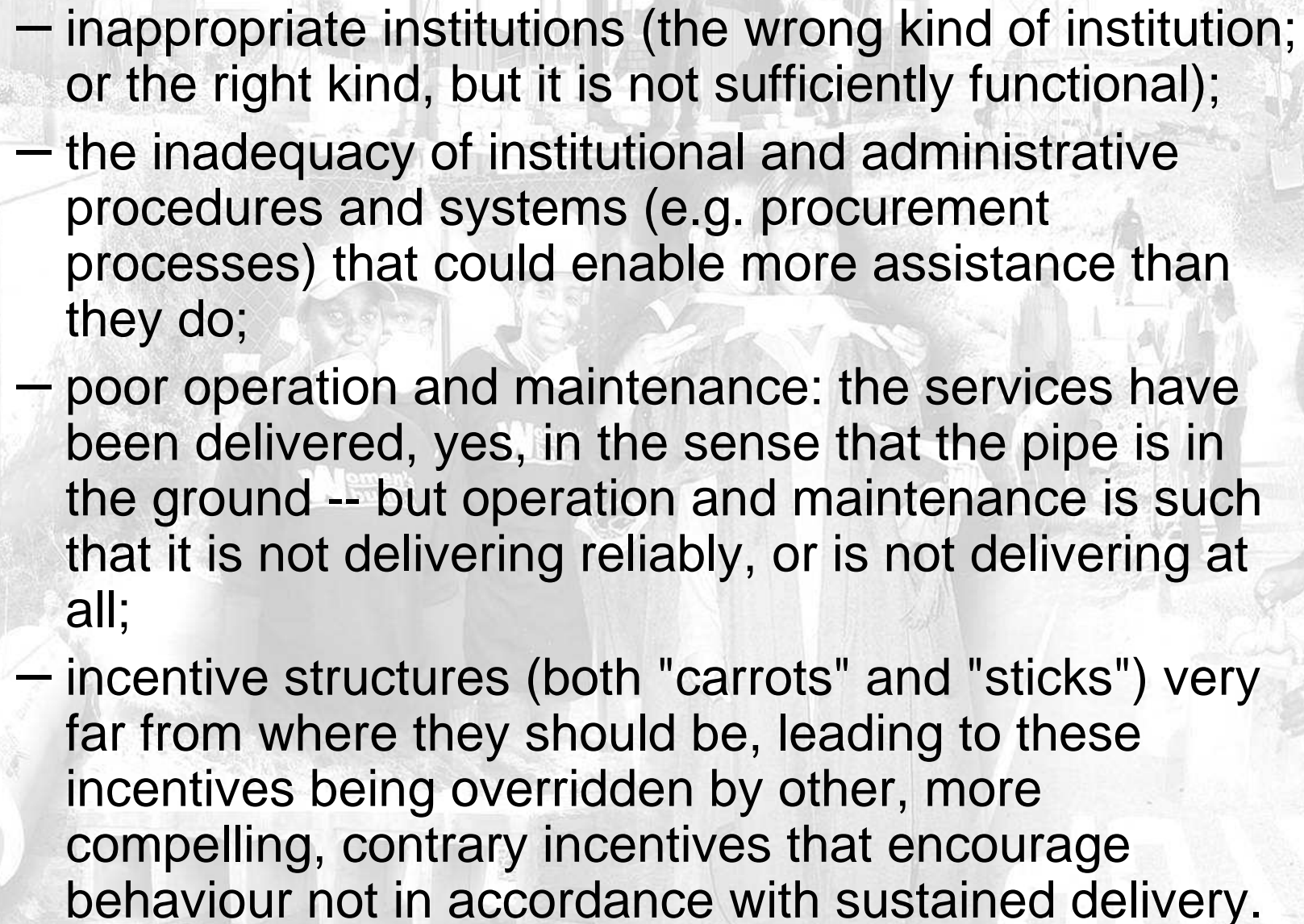


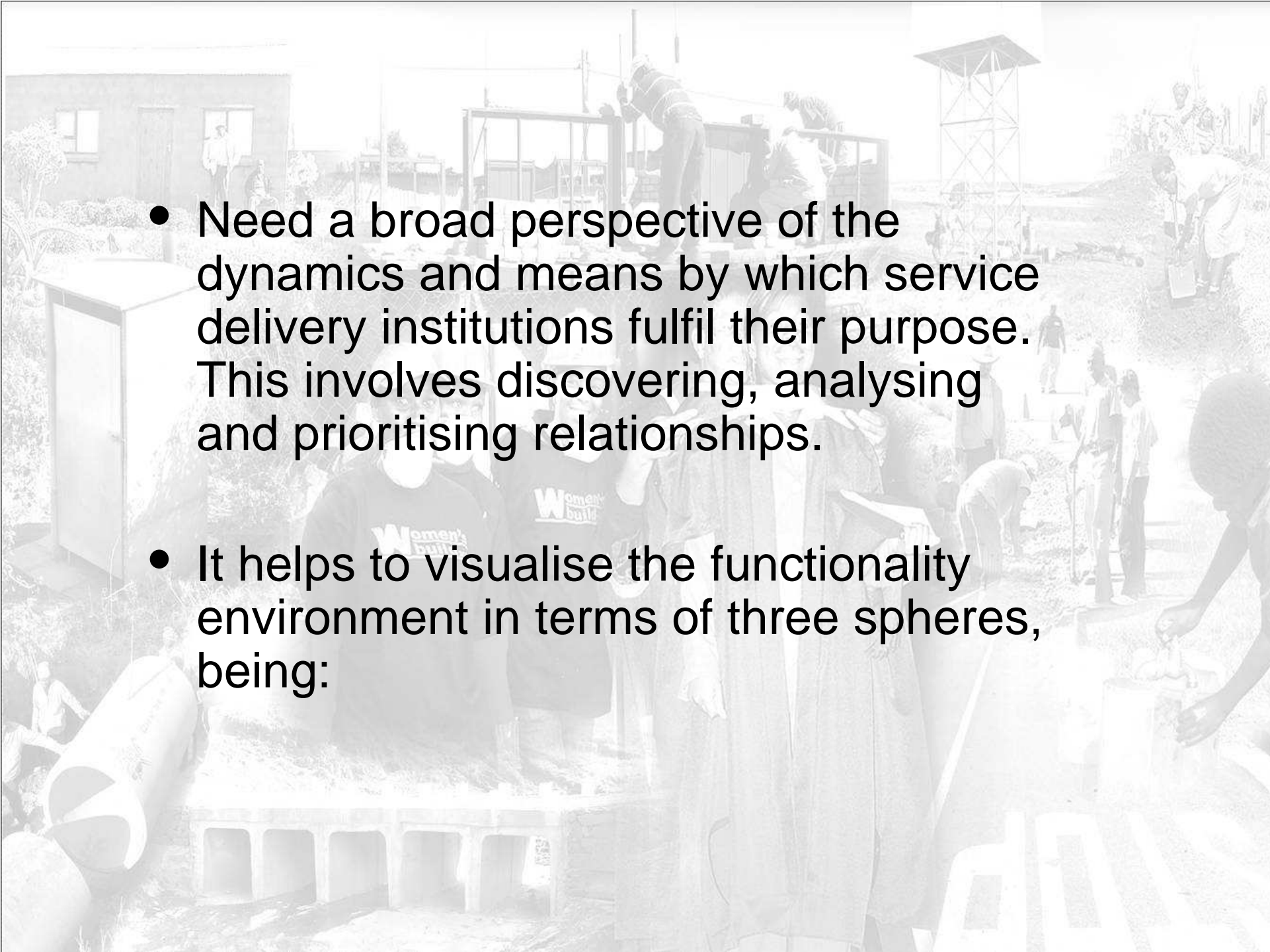


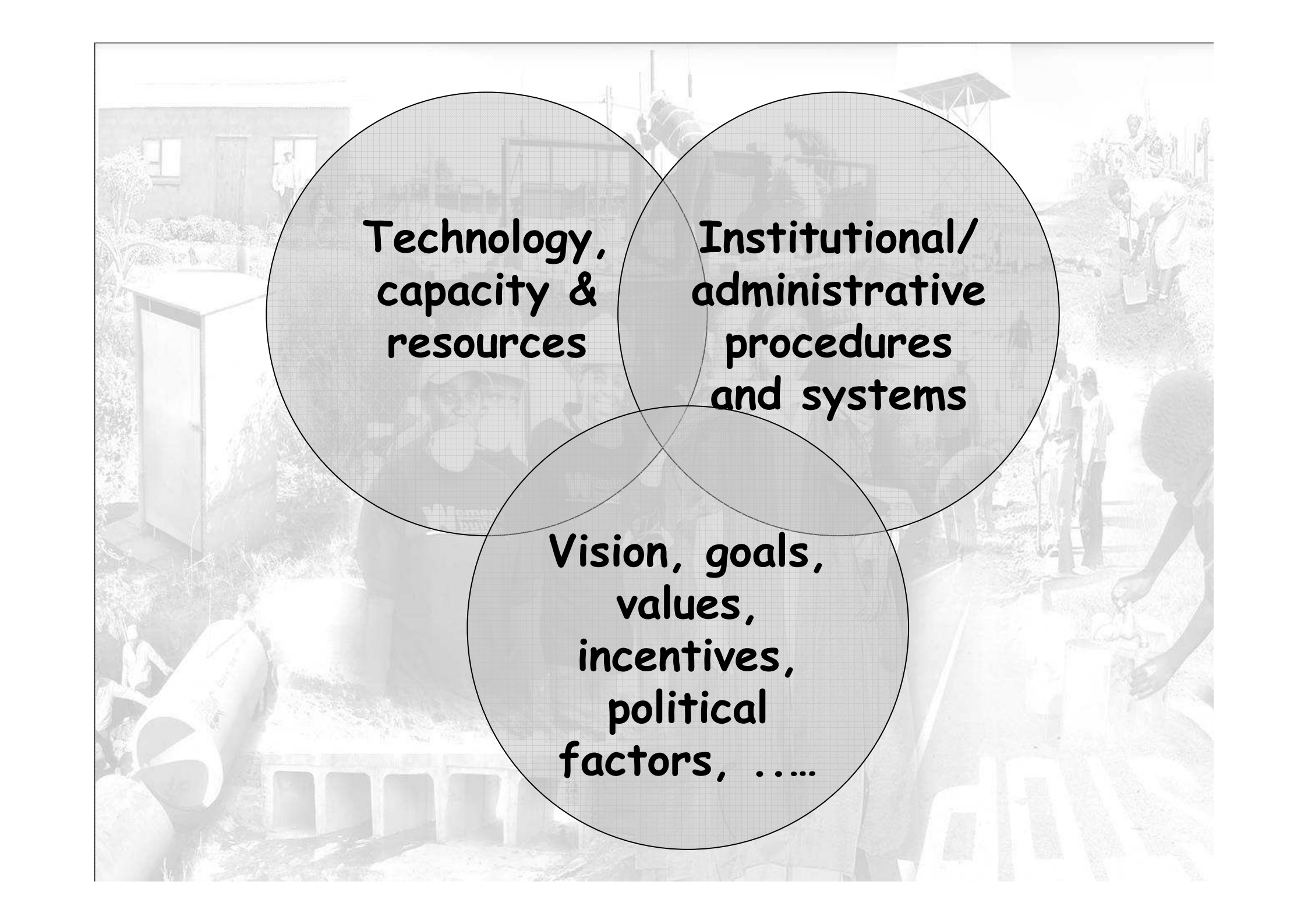


Technology/capacity/resources is very often the main problem area -- the site of the weakest link in sustained service delivery. But, just as often, the most important or most urgent weakness lies elsewhere. For example, one or (usually) more of the following (examples only -- this list is not exhaustive):

- suboptimal spatial planning (both in terms of where areas are located, and how areas are planned);
- misplaced obsession with goals of "best practice" and "world class", often at the cost of "good enough" and "fit for purpose";
- skills shortfalls

- 
- inappropriate institutions (the wrong kind of institution; or the right kind, but it is not sufficiently functional);
 - the inadequacy of institutional and administrative procedures and systems (e.g. procurement processes) that could enable more assistance than they do;
 - poor operation and maintenance: the services have been delivered, yes, in the sense that the pipe is in the ground -- but operation and maintenance is such that it is not delivering reliably, or is not delivering at all;
 - incentive structures (both "carrots" and "sticks") very far from where they should be, leading to these incentives being overridden by other, more compelling, contrary incentives that encourage behaviour not in accordance with sustained delivery.

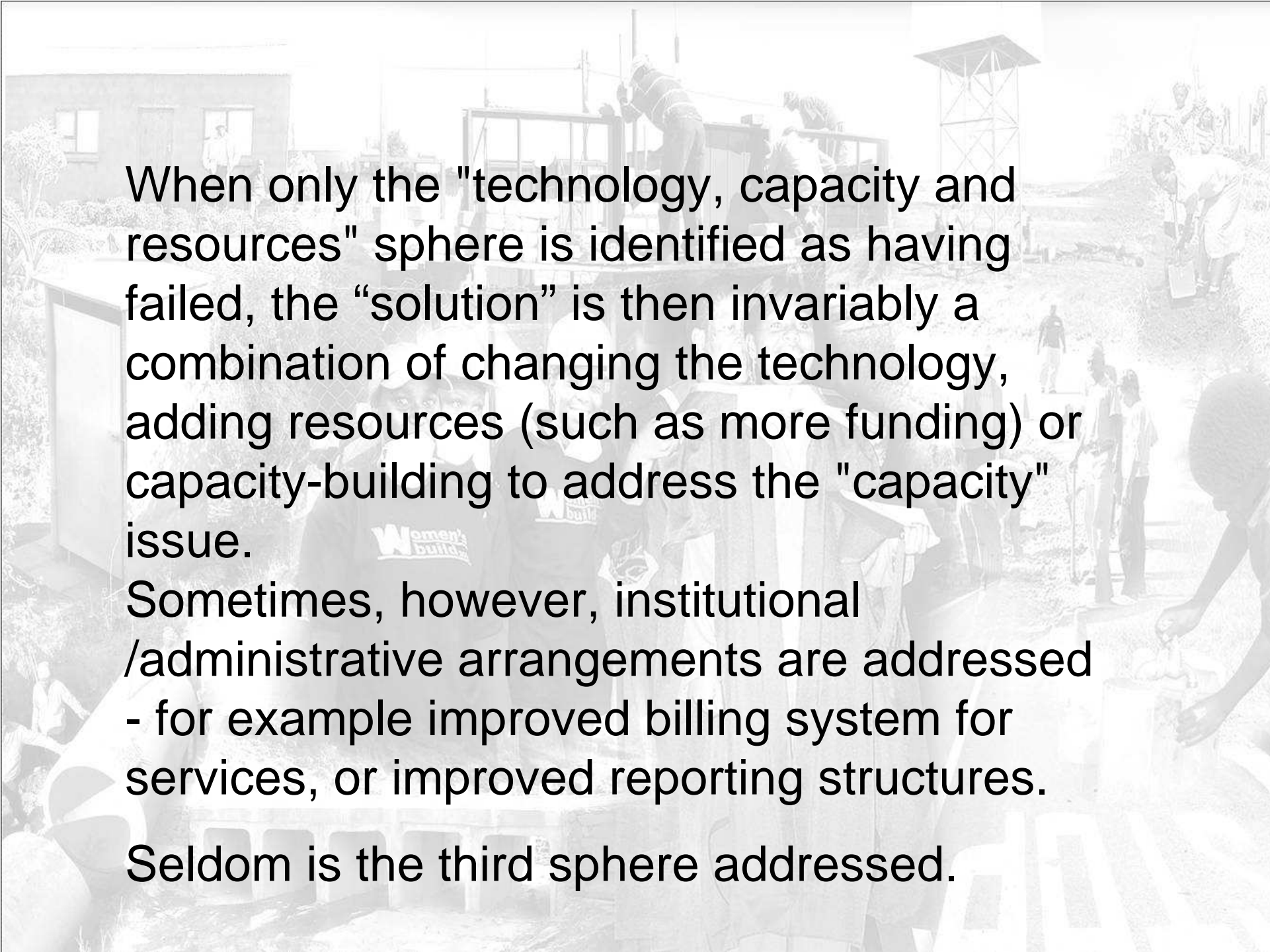
- 
- Need a broad perspective of the dynamics and means by which service delivery institutions fulfil their purpose. This involves discovering, analysing and prioritising relationships.
 - It helps to visualise the functionality environment in terms of three spheres, being:



**Technology,
capacity &
resources**

**Institutional/
administrative
procedures
and systems**

**Vision, goals,
values,
incentives,
political
factors,**



When only the "technology, capacity and resources" sphere is identified as having failed, the "solution" is then invariably a combination of changing the technology, adding resources (such as more funding) or capacity-building to address the "capacity" issue.

Sometimes, however, institutional /administrative arrangements are addressed - for example improved billing system for services, or improved reporting structures.

Seldom is the third sphere addressed.



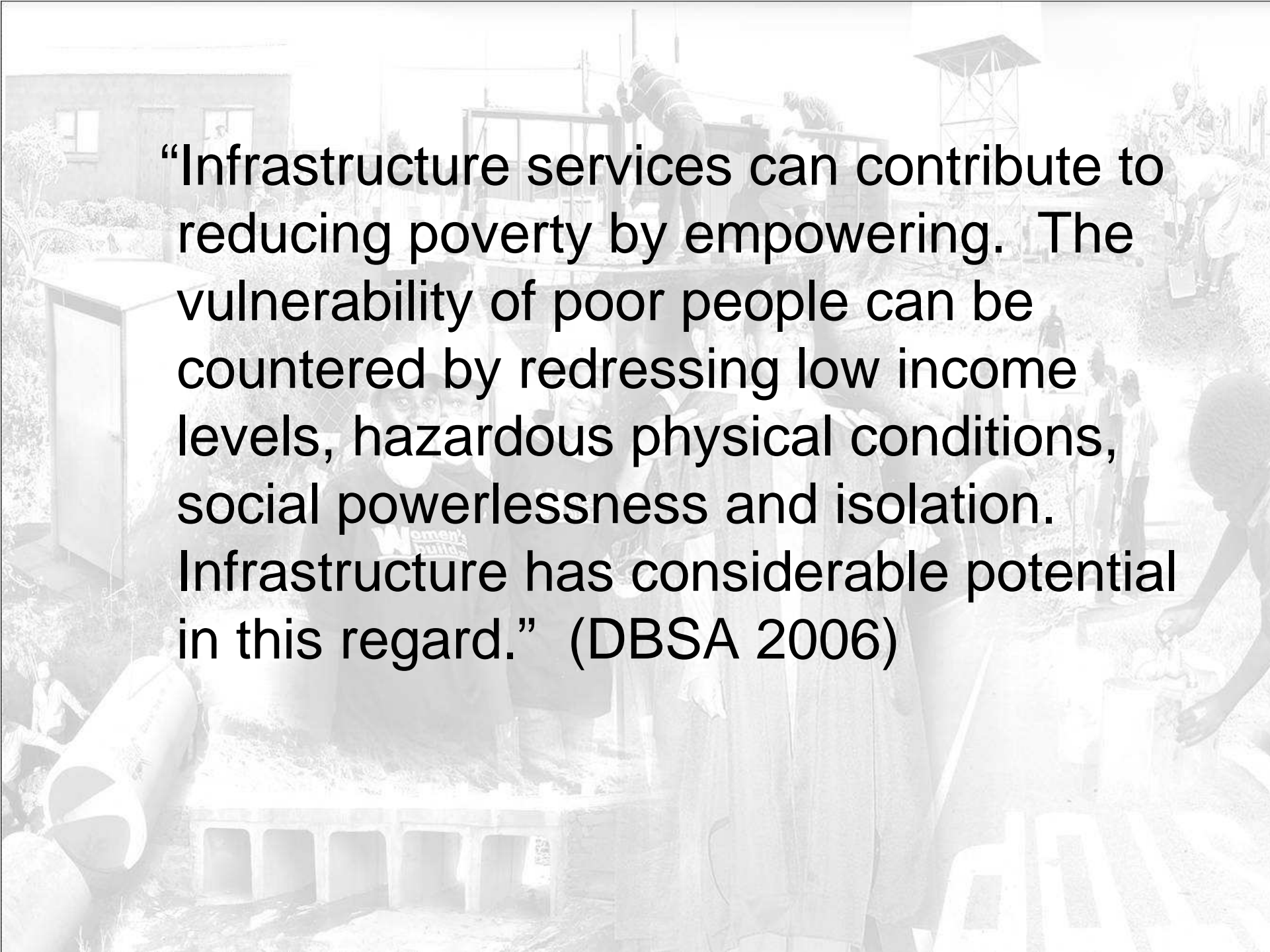
Chapter 1:

- Services delivery is a process and an integrated system. Both are only as strong as their weakest links.
- **What is delivery?**
- Findings that the weakest generic links are
.....

Context

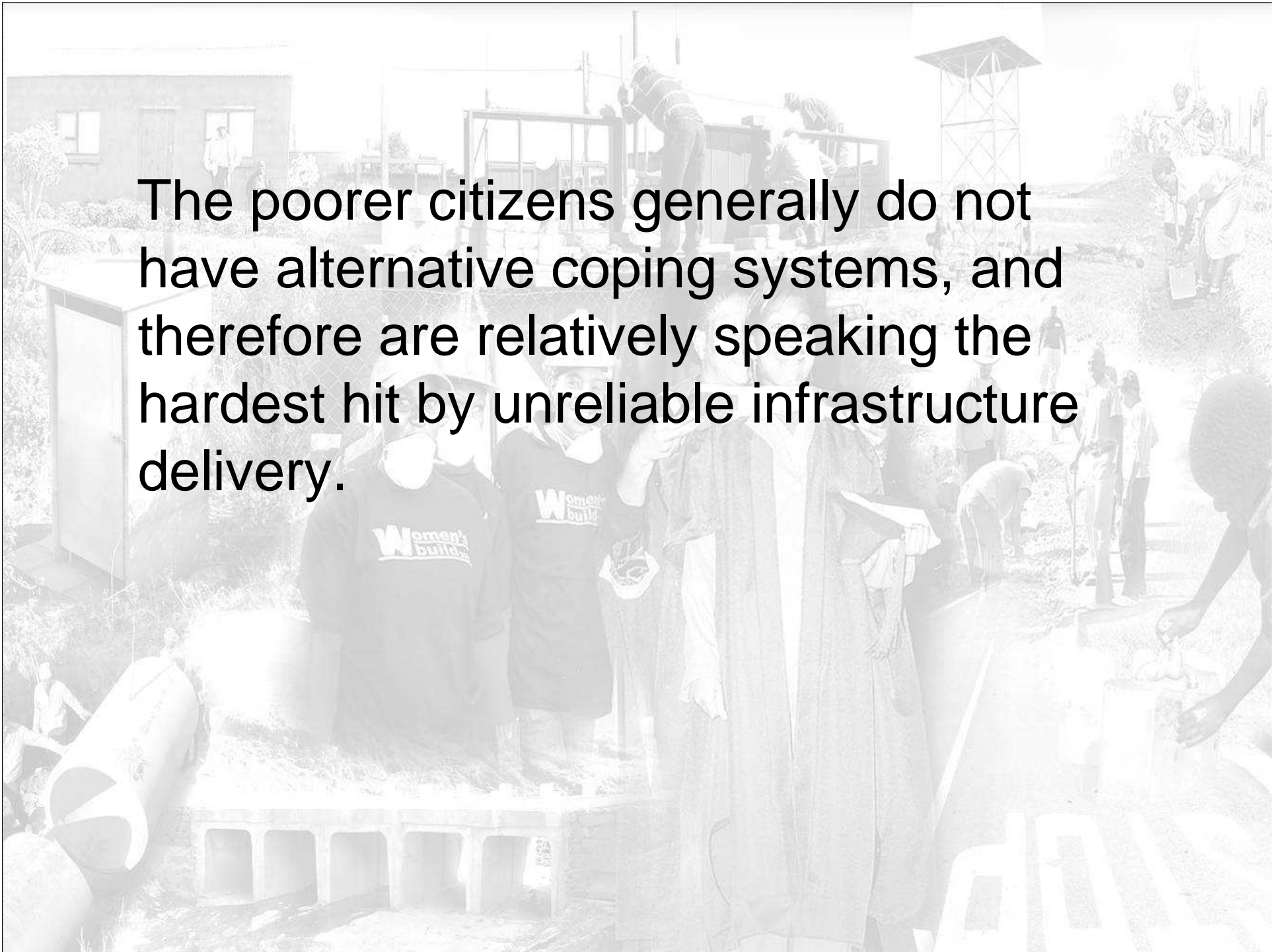
Infrastructure, in the form of public buildings, roads, water and sewerage systems, electricity and other services, supports quality of life and is the foundation of a healthy economy





“Infrastructure services can contribute to reducing poverty by empowering. The vulnerability of poor people can be countered by redressing low income levels, hazardous physical conditions, social powerlessness and isolation. Infrastructure has considerable potential in this regard.” (DBSA 2006)

The poorer citizens generally do not have alternative coping systems, and therefore are relatively speaking the hardest hit by unreliable infrastructure delivery.





Eishkom

It's broken



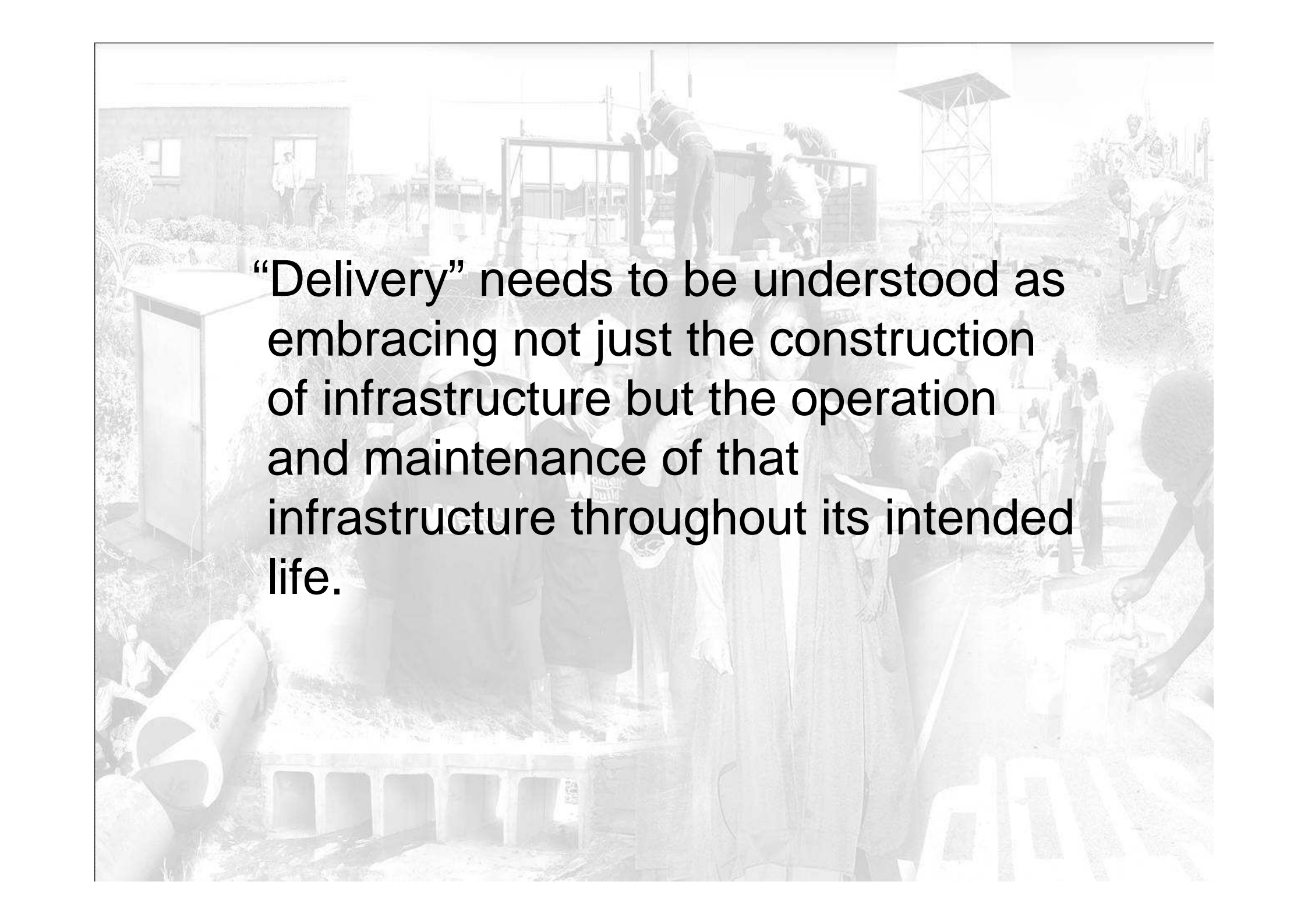




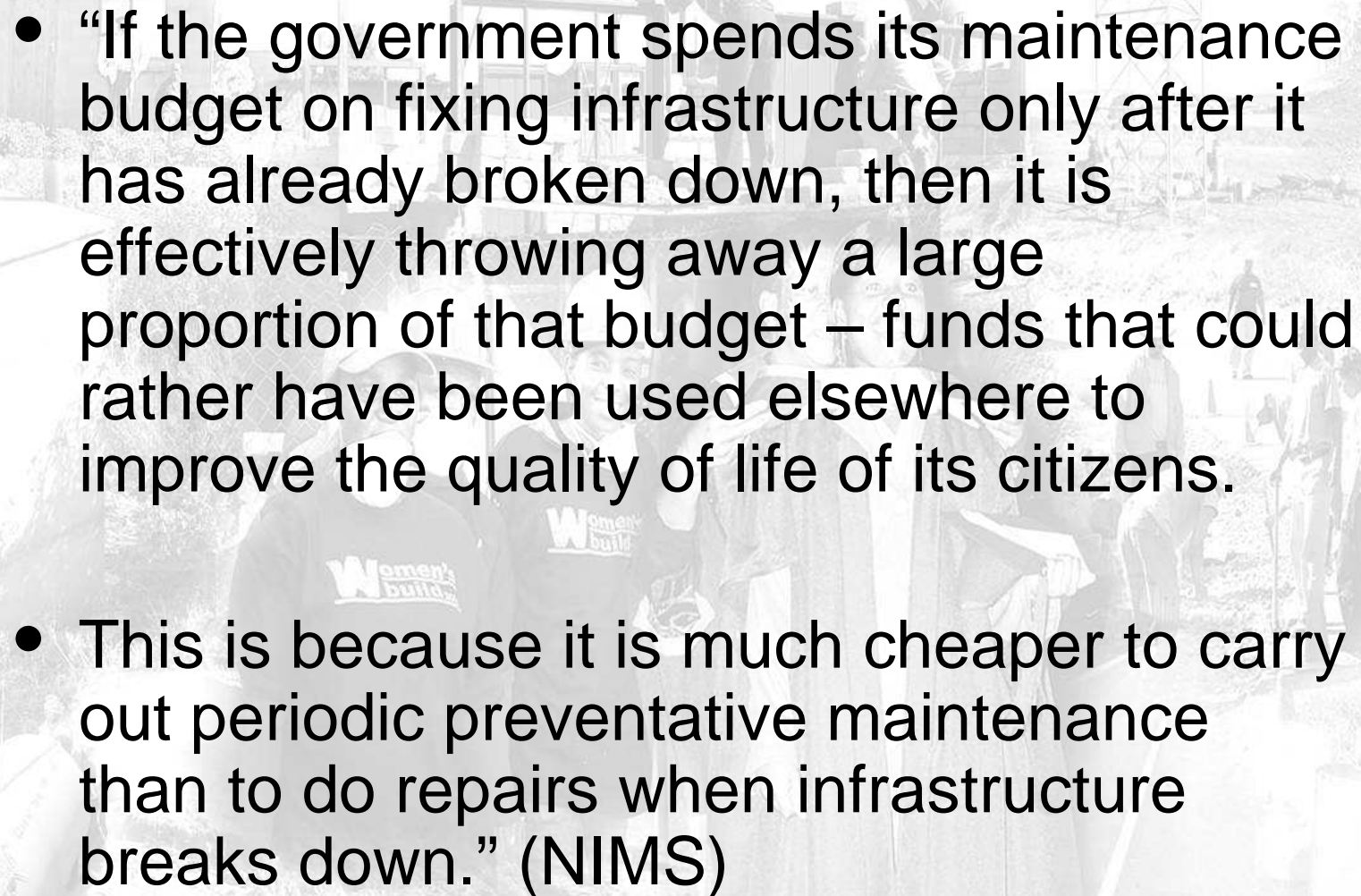
The stock of public sector infrastructure is significant.

Current replacement cost of this infrastructure, excluding that owned by the State-owned enterprises, exceeds R1000 billion.

CSIR 2006



“Delivery” needs to be understood as embracing not just the construction of infrastructure but the operation and maintenance of that infrastructure throughout its intended life.

- 
- “If the government spends its maintenance budget on fixing infrastructure only after it has already broken down, then it is effectively throwing away a large proportion of that budget – funds that could rather have been used elsewhere to improve the quality of life of its citizens.
 - This is because it is much cheaper to carry out periodic preventative maintenance than to do repairs when infrastructure breaks down.” (NIMS)

“The SAICE infrastructure report card for SA: 2006”

Water

D+

for DWAF
infrastructure

C+

for major urban areas

D-

for all other areas

Sanitation
(including wastewater)

C-

for major urban areas

E

for all other areas

Creamer Media's

FOUNDED 1981

REAL ECONOMY NEWS WEEKLY

ENGINEERING NEWS

February 2-8 2007

Volume 27 no 3

ISSN 0257-8646

www.engineeringnews.co.za

'PATCH & PRAY'

Chronic underspend on maintenance of
South Africa's public infrastructure ►16

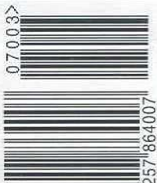
**CIVIL ENGINEERS'
INFRASTRUCTURE
REPORT CARD**

D+

FREE

MINING WEEKLY

INSIDE

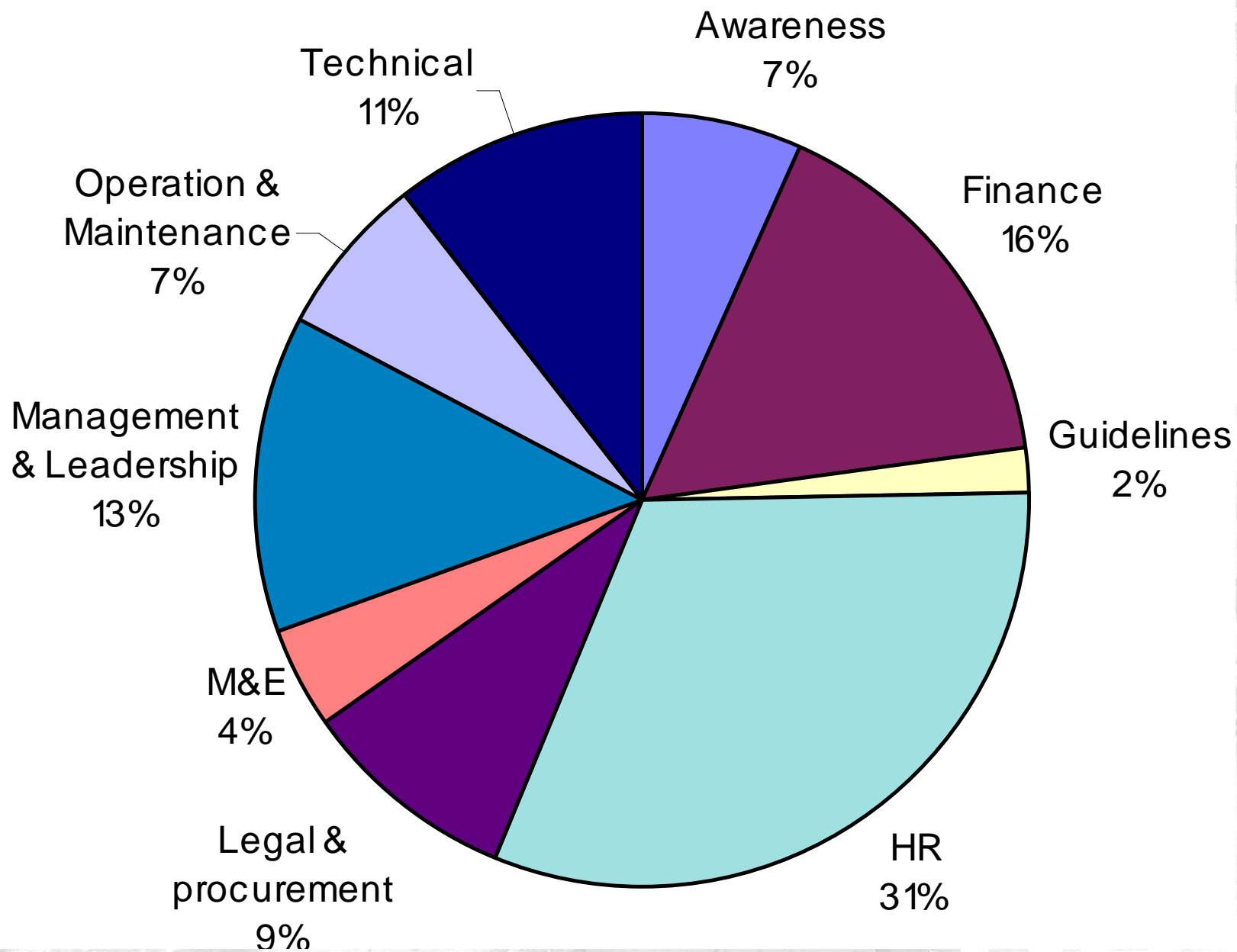




Chapter 1:

- Services delivery is a process and an integrated system. Both are only as strong as their weakest links.
- What is delivery?
- **Findings that the weakest generic links are**

“Priority 1” solutions





The principal systemic issues underlying inadequate provision for long-term management and maintenance are:

- **inadequate budgets; and**
- **inadequate skills (and especially technical skills) and experience.**

Together with:

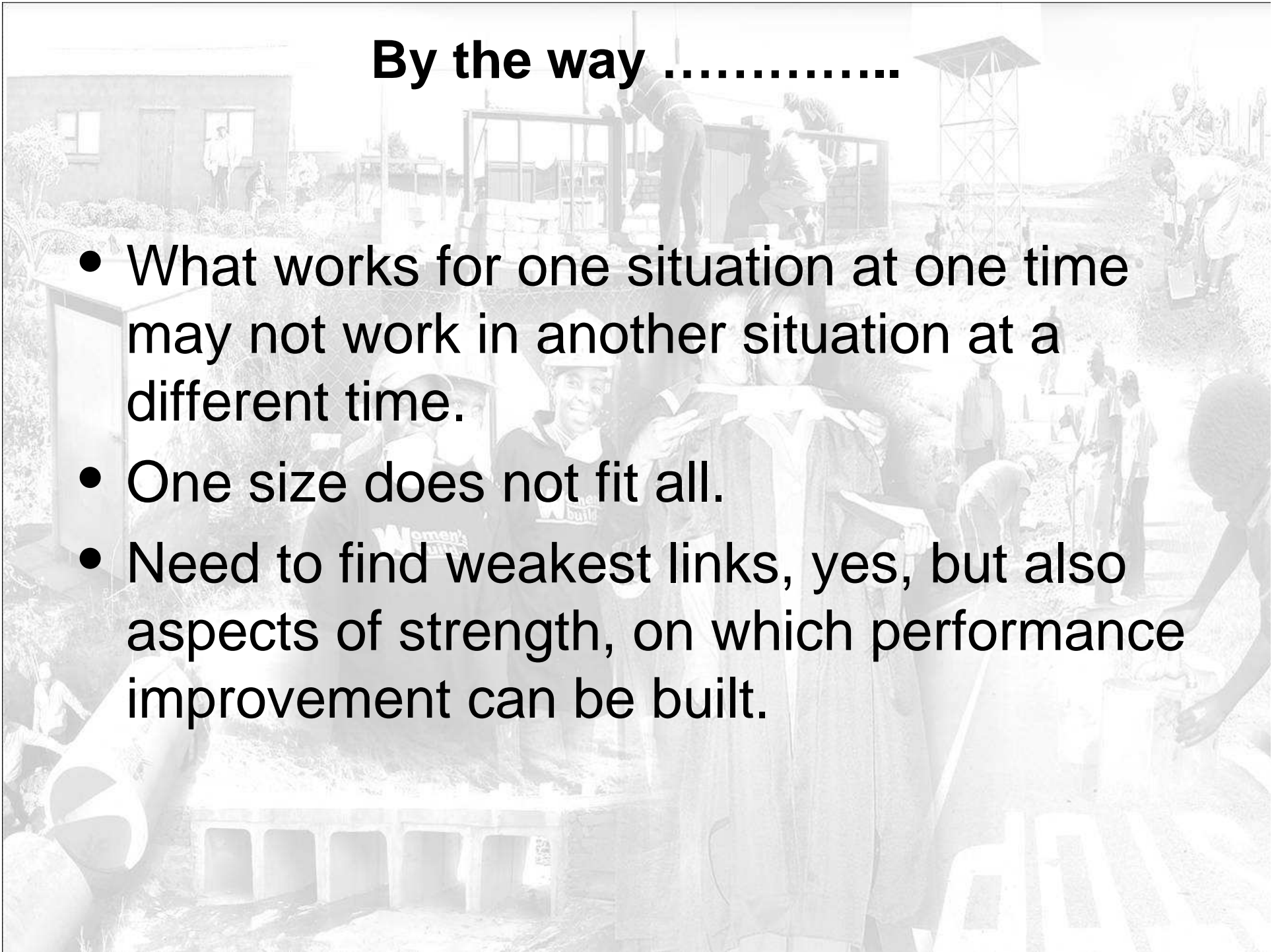
- **Lack of will/incentives to remedy the situation.**

To sum up this chapter:

- **Delivery results from a process - which process has to be understood by and subscribed to by all those with material influence on the process;**
- **the process can be viewed as a chain of events - and this chain is only as strong as its weakest link;**
- **for the chain to be strengthened, its weakest link must be identified, and then the weakness addressed;**
- **conversely, it is of no immediate value to attend to other links until the weakest link has been strengthened.**

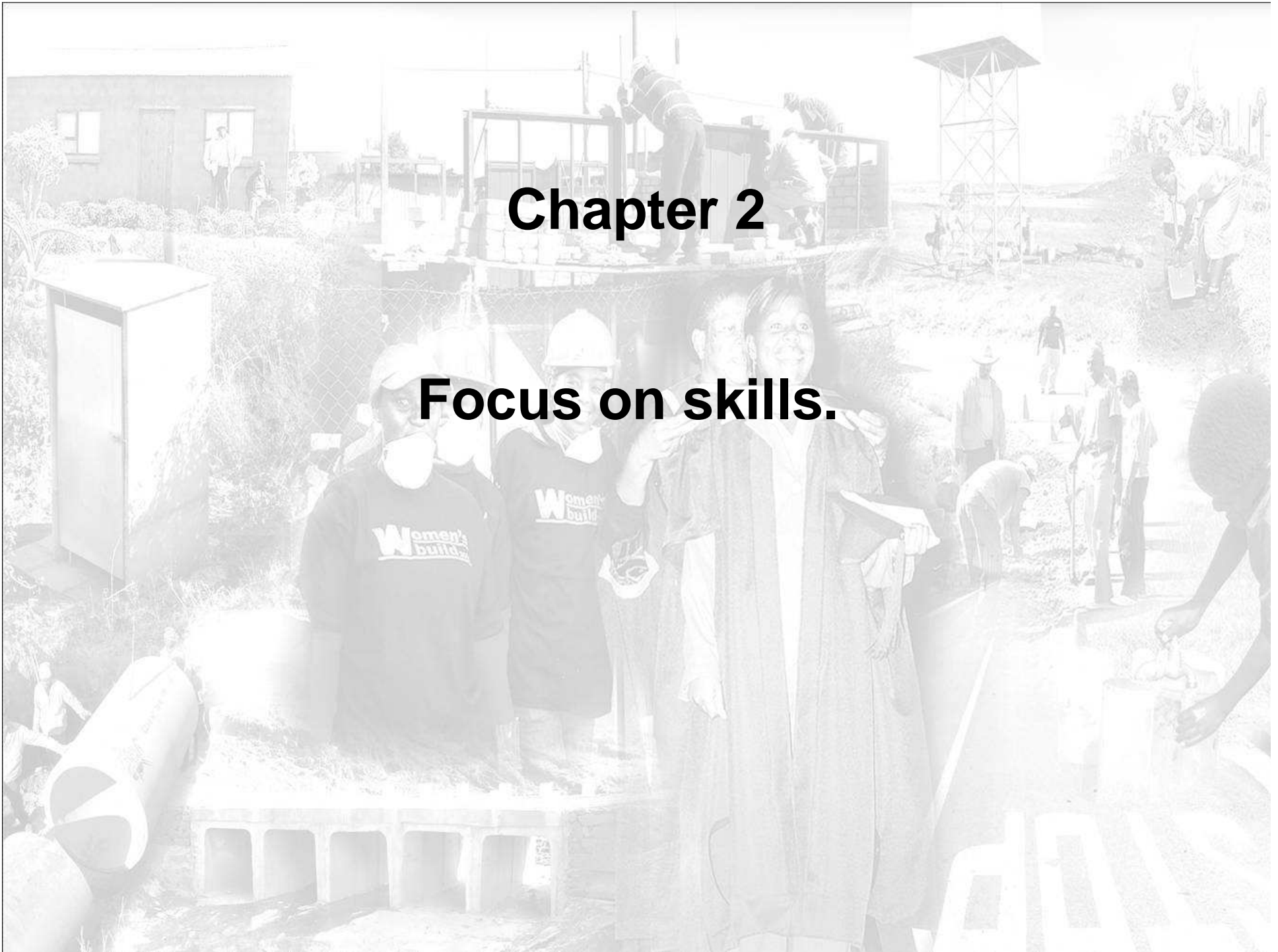
By the way

- What works for one situation at one time may not work in another situation at a different time.
- One size does not fit all.
- Need to find weakest links, yes, but also aspects of strength, on which performance improvement can be built.

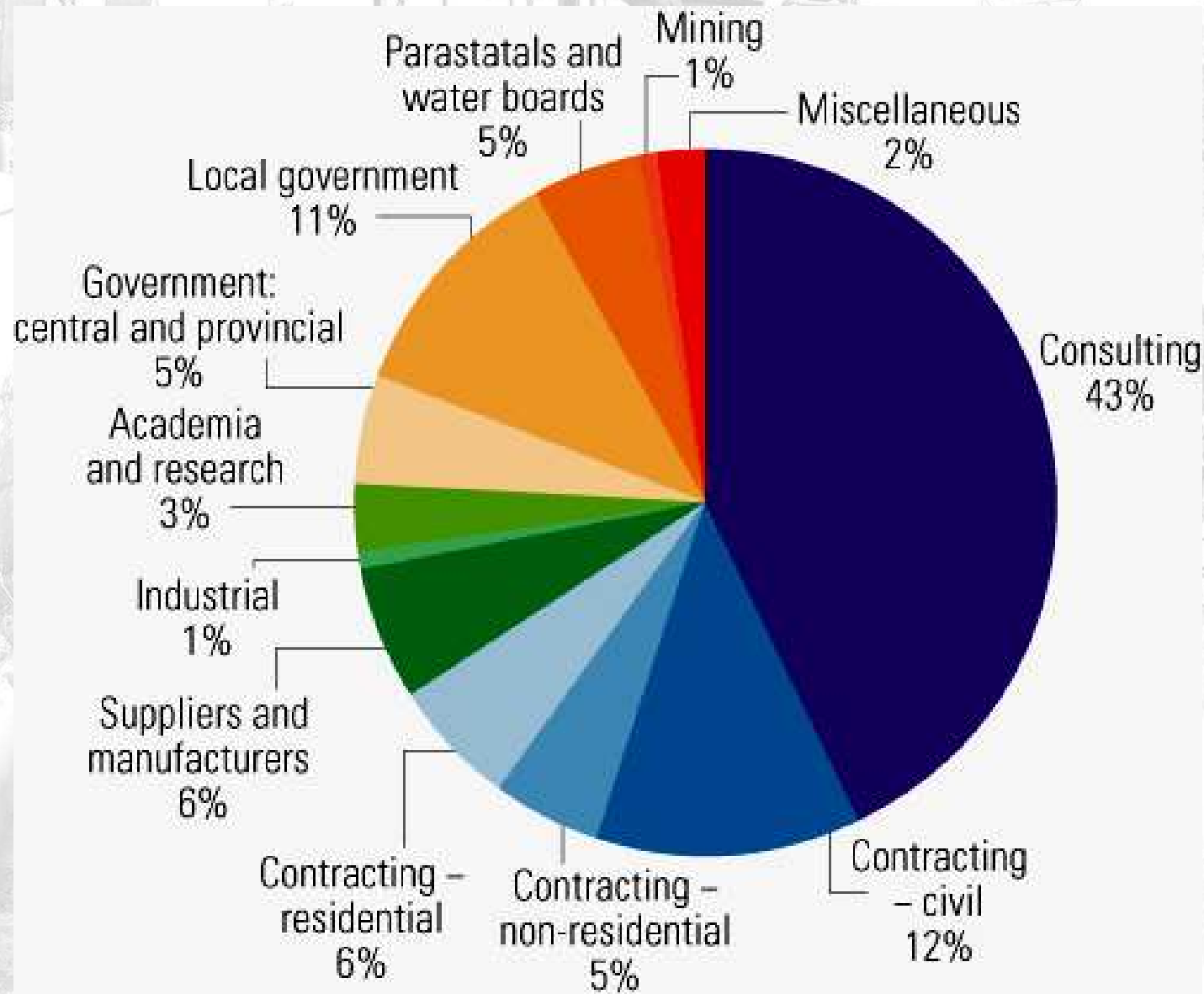


Chapter 2

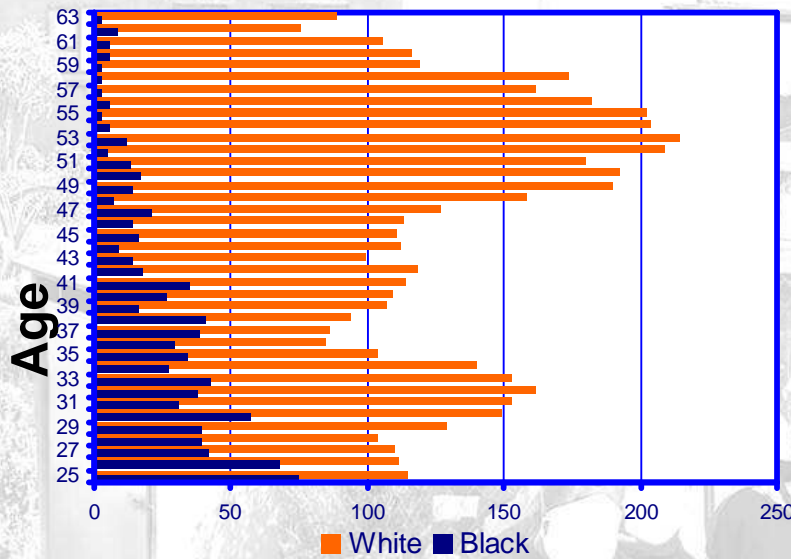
Focus on skills.



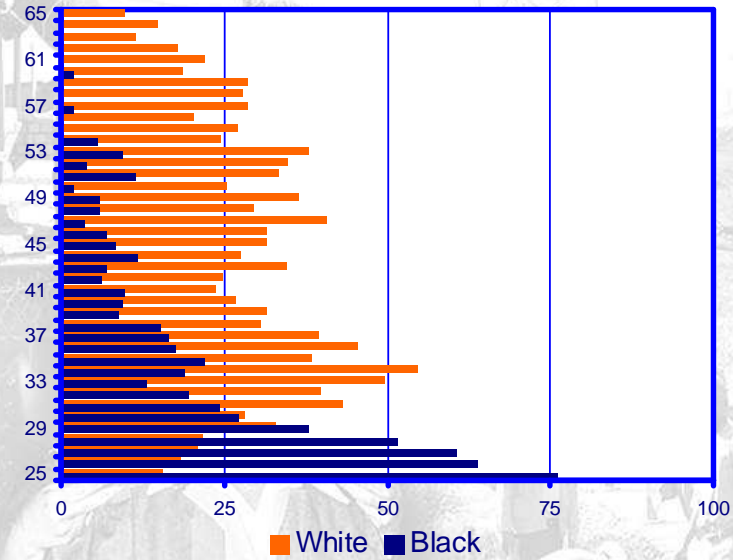
In 2004 there were ~ 15 000 civil engineers, technologists and technicians
Shown below is the % employed per sector



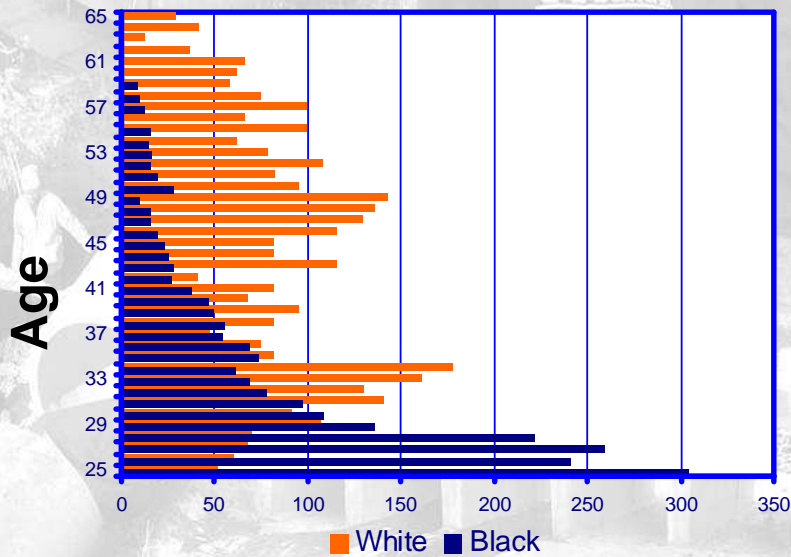
Engineer



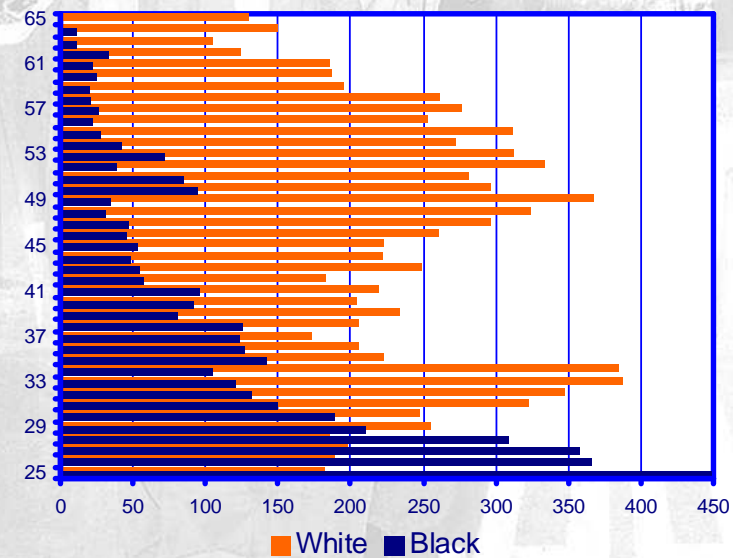
Technologist



Technician

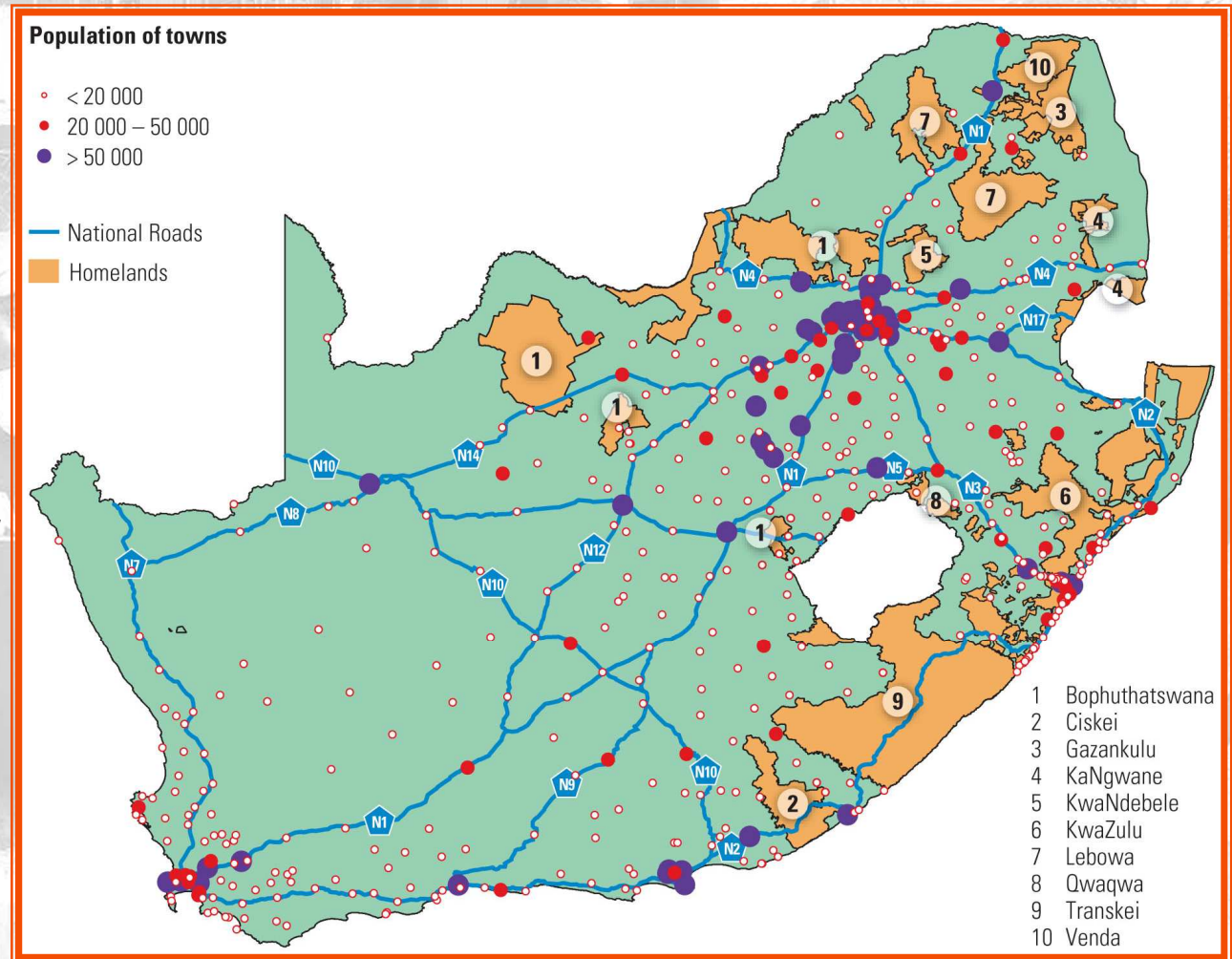


All combined



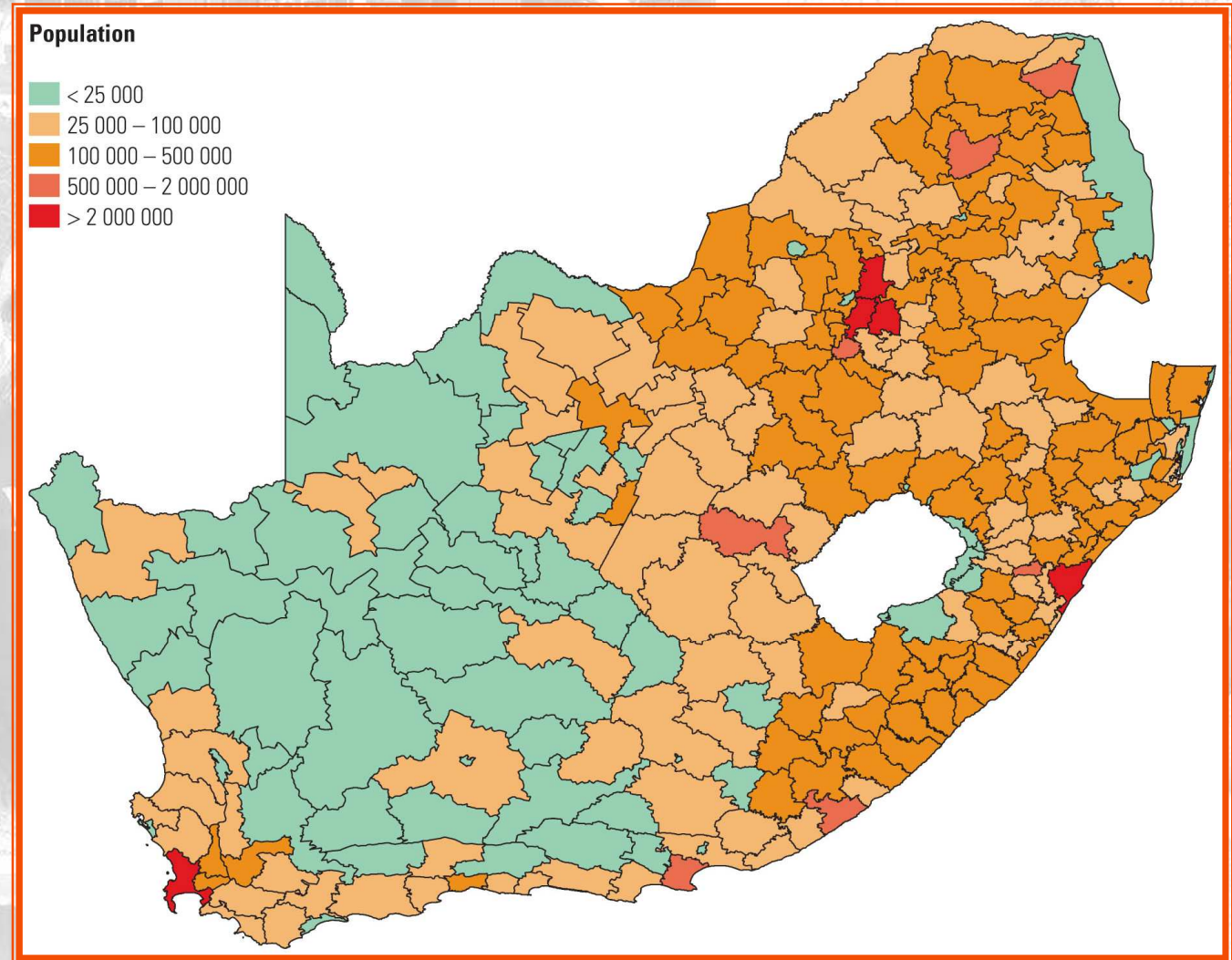
Developed local government in 1989

- Population served ~ 14 million
- Civil engineering professionals ~ 2500
- ~ 21 civil staff per hundred thousand population

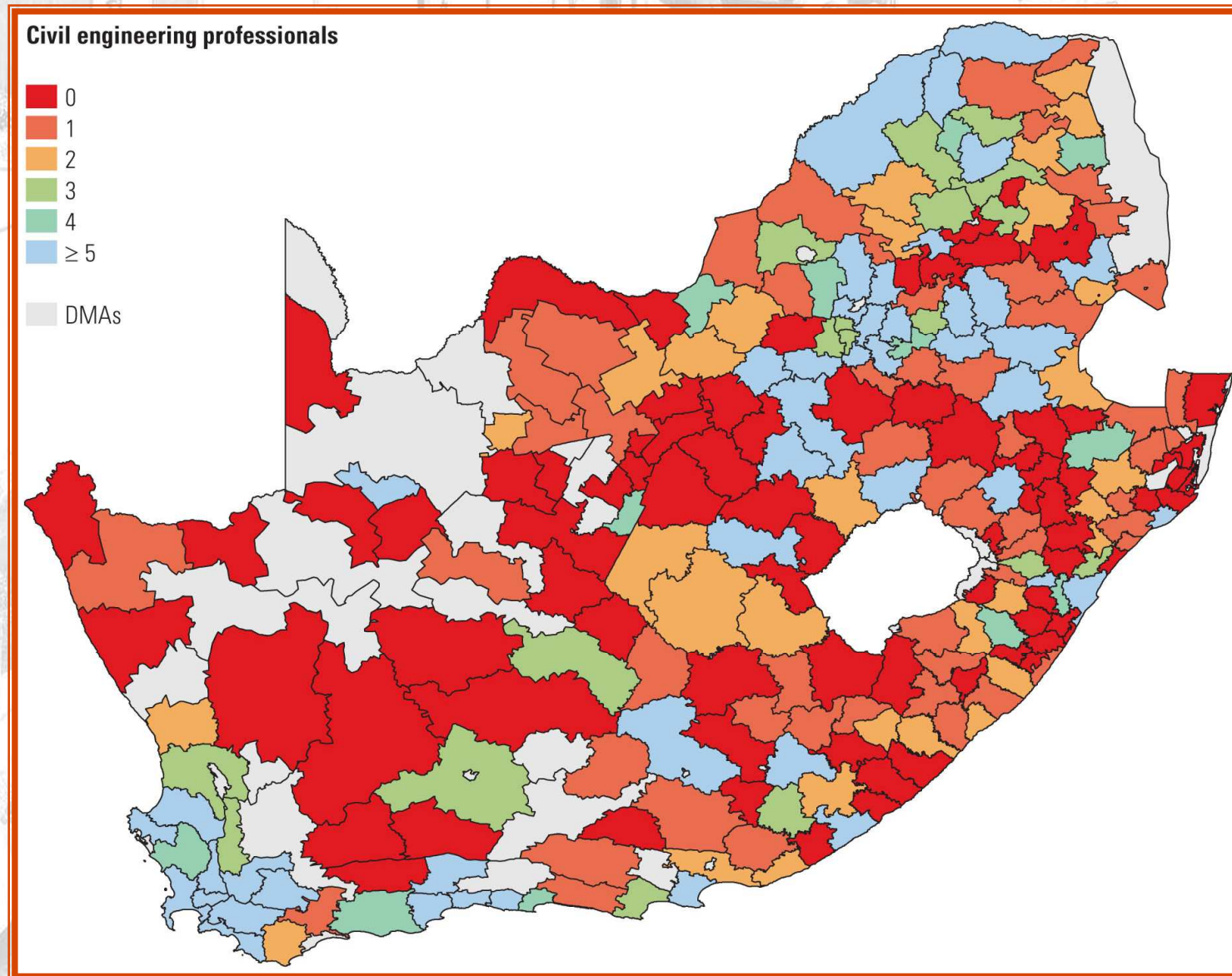


Local government since 2000

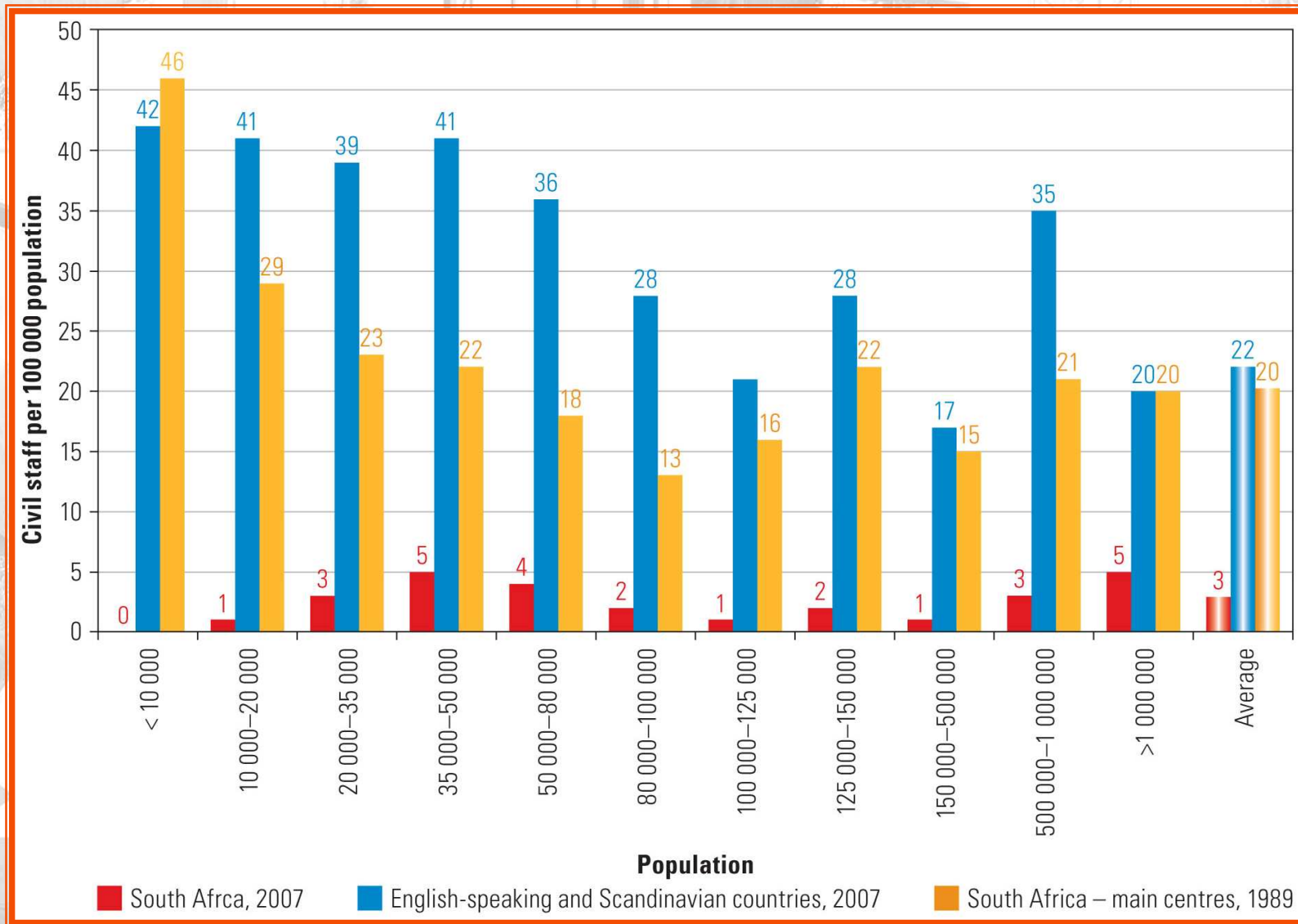
- **Population served**
~ 47 million
- **Civil engineering professionals**
~ 1300
- **~2.8 civil staff per hundred thousand population**



Civil engineering staff in 2005



Successful local authorities internationally



Engineering influence reduced

- City/Town Engineer replaced by Technical Services Director
- Technical Director at same level as heads of support departments
- Many Technical Services Directors are non-technical
- Large number of inexperienced engineering technicians

Environment



Challenges Council-wide

- Few senior staff experienced – need to professionalise and not politicise
- Officials have little or no authority, with too many operating decisions being taken by Council
- General challenge of leadership results in
 - Lack of discipline
 - Lack of systems
 - Poor or no processes
 - Inappropriate selection of staff



Two options

Rebuild civil engineering capacity

or

Outsource

But

Both require capacity!

Build, not restructure



Employ/deploy

- Employ ~200 students per annum
- Employ ~200 graduates per annum on 3 to 5 year training contracts
- Employ ~150 retired mentors / supervisors
- Attract ~300 experienced municipal staff back into the sector

Secondment

- Private sector to second experienced municipal staff to local government to rebuild capacity, structures and systems

Outsource

- Where appropriate, outsource to NGOs, CBOs, microenterprises, larger private sector

Adopt-a-town

- Private sector contractors to adopt-a-town to:
 - Address backlogs
 - Refurbish and rehabilitate
 - Put operating and maintenance systems and processes in place
 - Address losses, increase income etc
 - Build capacity

Artisans and operators

- There are ~ 2000 plumbers and other water service men in local government, but ~ 1100 vacancies. Plus more posts required – largely for maintenance
- The majority of the 3 000 to 5 000 operators working in the 2 000+ water and wastewater treatment plants do not meet DWAF requirements.

NUMBERS & N

Addressing
civil eng

NUMBERS & NEEDS

IN LOCAL GOVERNMENT

Civil engineering – the critical
profession for service delivery



Servicing schools Sanitation and water facilities



Water and the poverty trap

Spread of
HIV/AIDS

Poor level of
water services

High cost for
provision of
household water
and sanitation

Loss of
dignity

POOR WATER SUPPLY **POOR SANITATION**

Disease and
sickness

Skills
deficiencies

POVERTY

Limited employment
opportunities

**Education
problems**

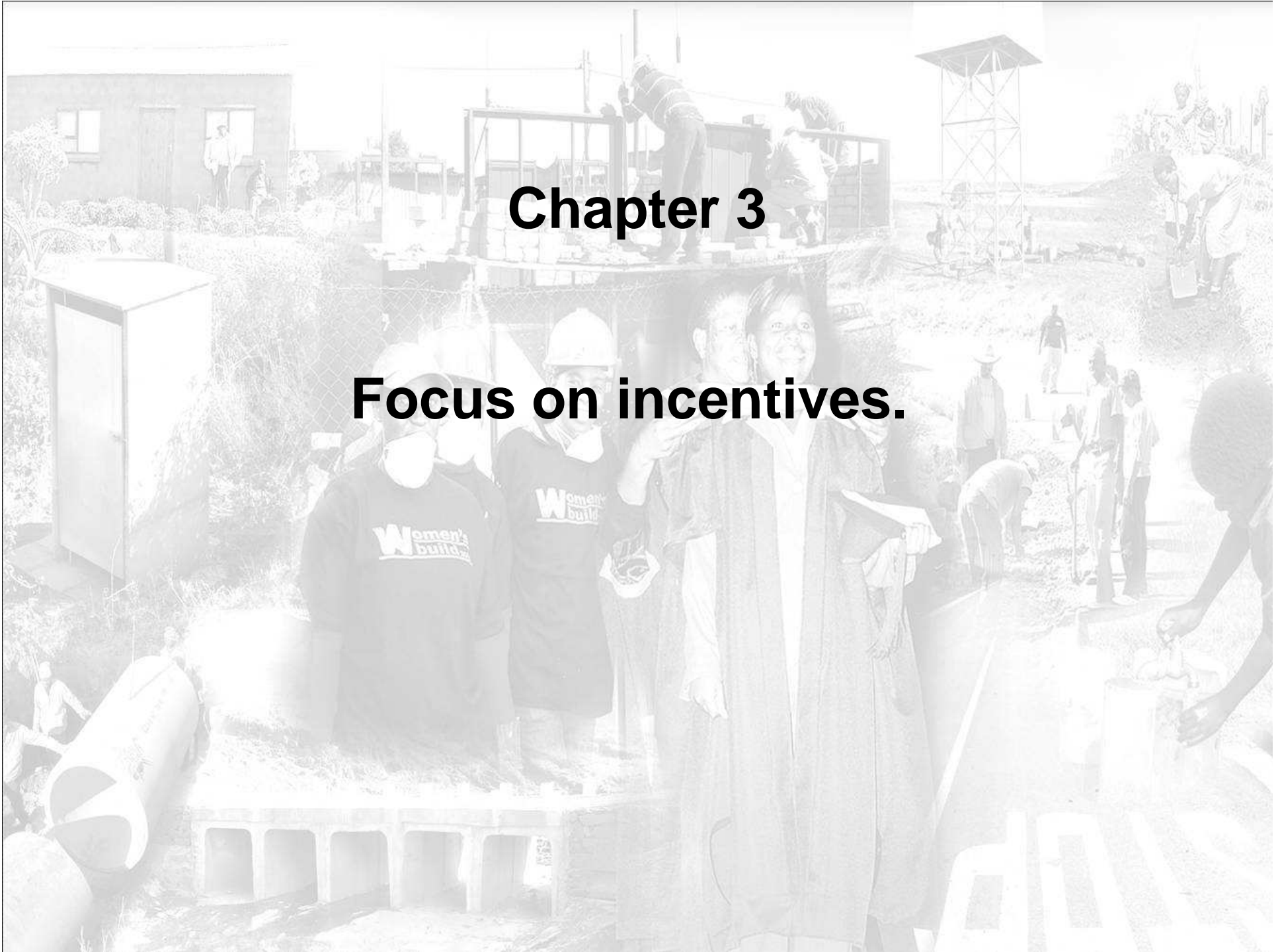
Many schools look like this

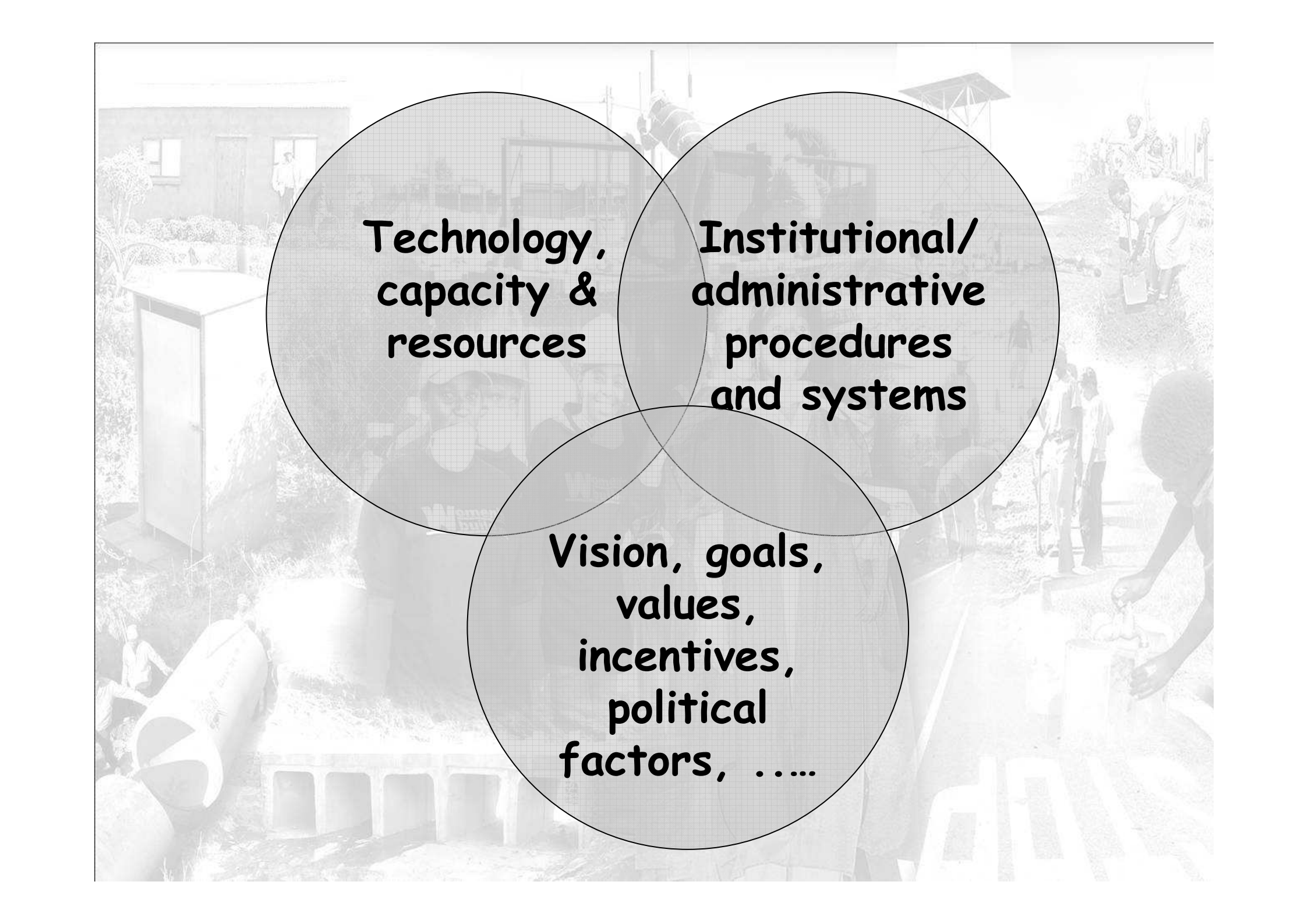




Chapter 3

Focus on incentives.





**Technology,
capacity &
resources**

**Institutional/
administrative
procedures
and systems**

**Vision, goals,
values,
incentives,
political
factors,**

SEPTEMBER 29, 2008



Why Women
Are Still Dying
In Childbirth

A Relaxed Obama
Has the Democratic
Party in a Panic



The Volt: Inside
GM's Latest
Electric Gamble

TIME

The Price Of Greed

How Wall Street
took a mighty fall—
and brought markets
around the world
down with it

BY ANDY SERWER &
ALLAN SLOAN




LESOTHO P 30.00
MALAWI P 30.00
MAURITIUS R 30.00
NAMIBIA MWI 130.00
SOUTH AFRICA R 30.00
SWAZILAND SAI 27.00
ZIMBABWE Z 27.00



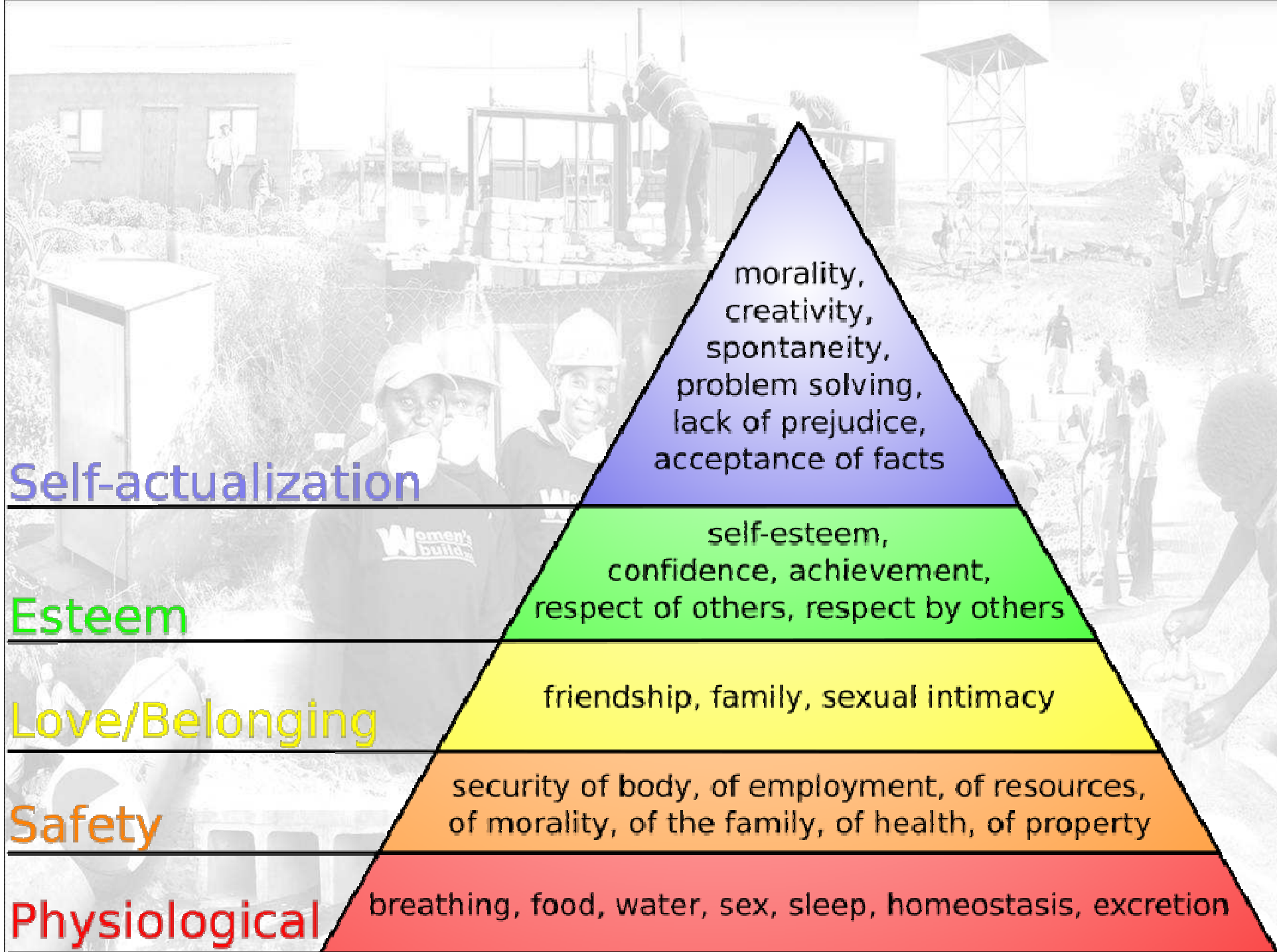
9 770928 843065

A collage of images showing women in construction gear and graduation gowns, with a background of a construction site. The text "It's the incentives!!" is overlaid in the center.

It's the incentives!!

A grayscale photograph of a construction site. In the foreground, a woman in a graduation gown stands with her arms around two women wearing hard hats and safety masks. One woman wears a dark t-shirt with the text "Women's build" visible. In the background, several people are working on a building's steel frame. A tall metal tower stands to the right, and a person is filling a bucket from a water tap. The scene is busy with construction activity.

**Carrots
and
sticks**



Self-actualization

morality,
creativity,
spontaneity,
problem solving,
lack of prejudice,
acceptance of facts

Esteem

self-esteem,
confidence, achievement,
respect of others, respect by others

Love/Belonging

friendship, family, sexual intimacy

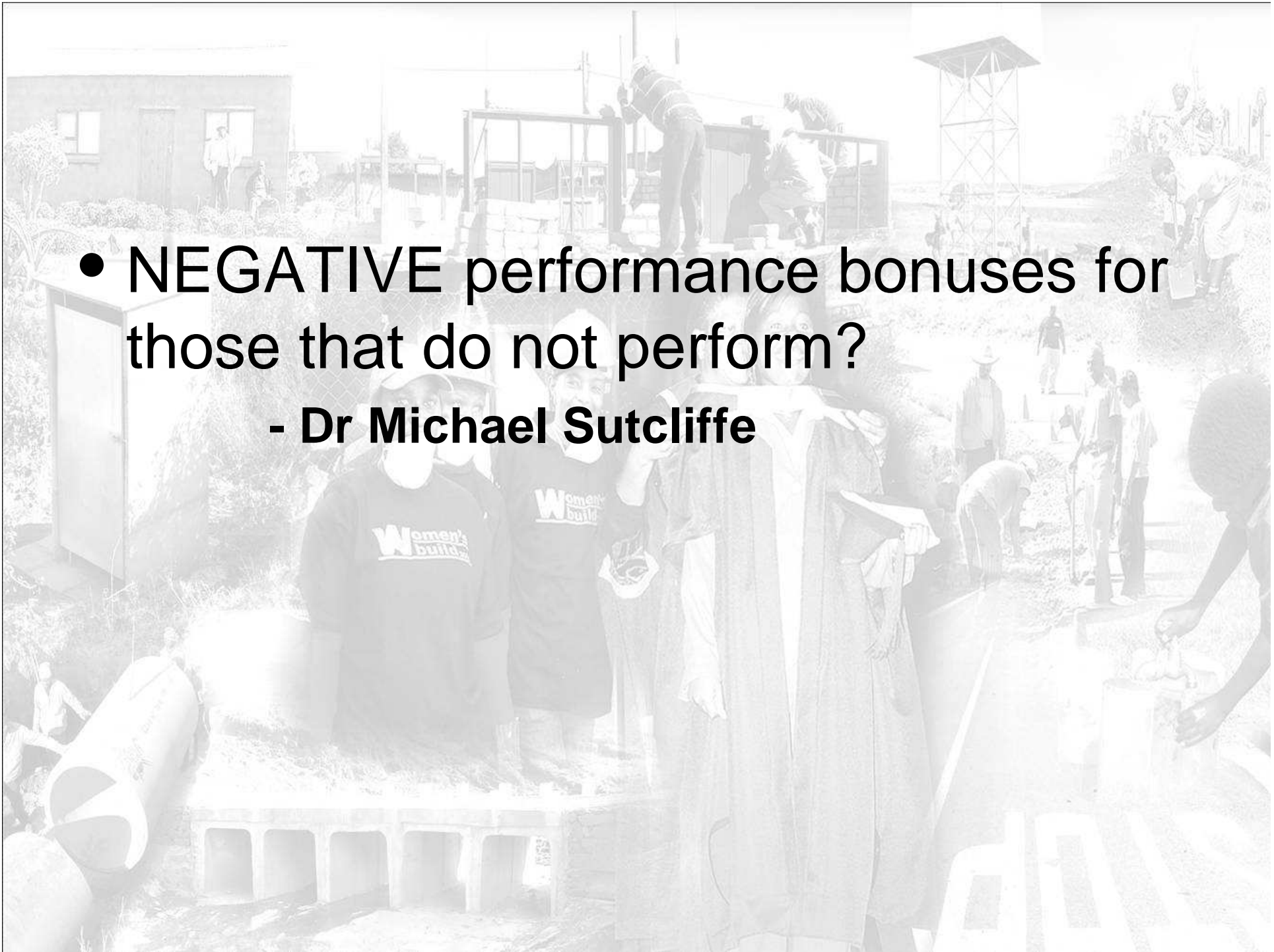
Safety

security of body, of employment, of resources,
of morality, of the family, of health, of property

Physiological

breathing, food, water, sex, sleep, homeostasis, excretion

- **NEGATIVE** performance bonuses for those that do not perform?
- **Dr Michael Sutcliffe**





- **DWAF as Sector Leader:**

- Create an enabling environment for IAM (including policy, legislation, norms & standards)
- Develop a national IAM strategy and implementation framework
- Facilitate stakeholder participation & awareness
- Provide support, training and mentorship

- **DWAF as Sector Regulator:**

- Monitor performance of IAM
 - service interruptions, service quality, functionality, etc.
- Audit compliance to minimum IAM standards:
 - asset registers, maintenance plan, risk plan etc.
- Audit asset values & asset investment plans (with NT)

- **DWAF as Custodian of Water:**

- Pollution control, water conservation / leakage control
- Cost-effective use, licensing etc.



Chapter 4:

To conclude:

There are no quick fixes!

- **Essential: Sufficient budget (for repairs, for planned maintenance, for spares, for infrastructure refurbishment and renovation, etc).**
- **Essential: Staff are competent (training and experience) and committed (i.e. have correct attitude – perhaps assisted by incentives).**
- **Essential: The correct infrastructure.**
- **Essential: Councillors accept sound technical and financial advice, and lead the way.**

To sum the whole presentation:

- **Delivery results from a process - which process has to be understood by and subscribed to by all those with material influence on the process;**
- **the process can be viewed as a chain of events - and this chain is only as strong as its weakest link;**
- **for the chain to be strengthened, its weakest link must be identified, and then the weakness addressed;**
- **conversely, it is of no immediate value to attend to other links until the weakest link has been strengthened.**

