



CESA

Consulting Engineers South Africa



Your Partner in Enabling Consulting Engineering Excellence

PRESIDENTIAL THEME FOR 2018



Effective Ethical
Leadership

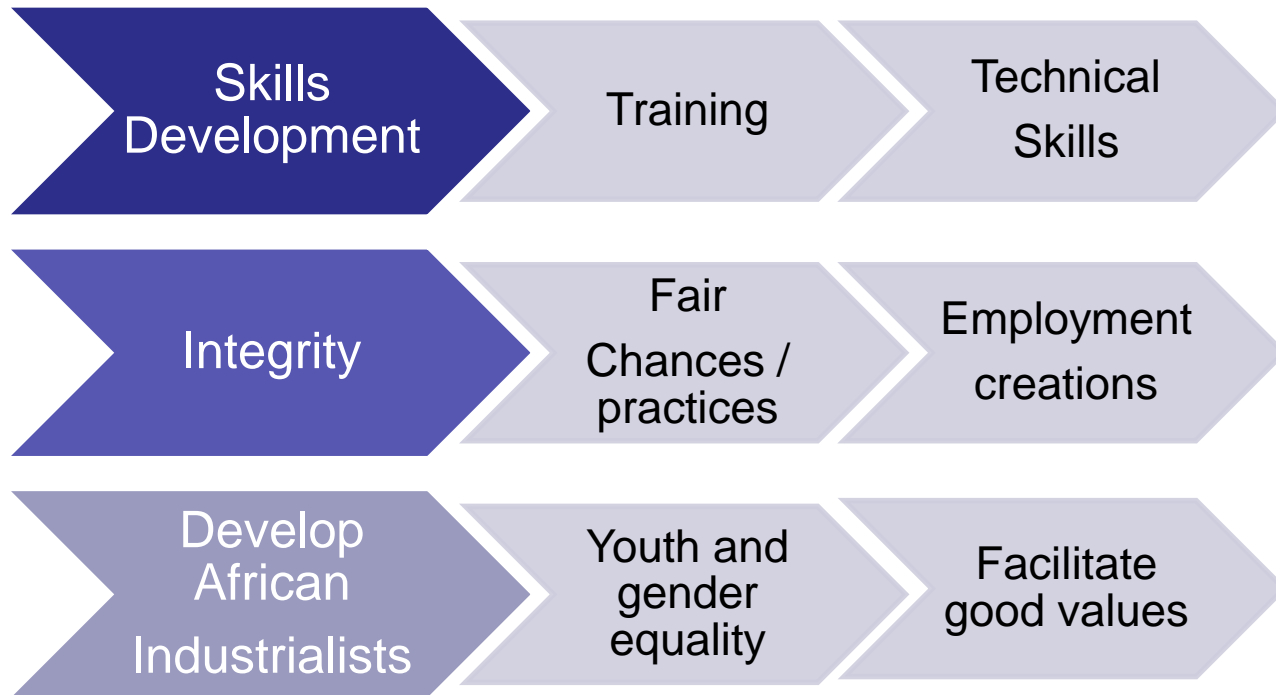
Industry
integration and
working
collaboratively

Transforming
the hearts and
minds of our
people

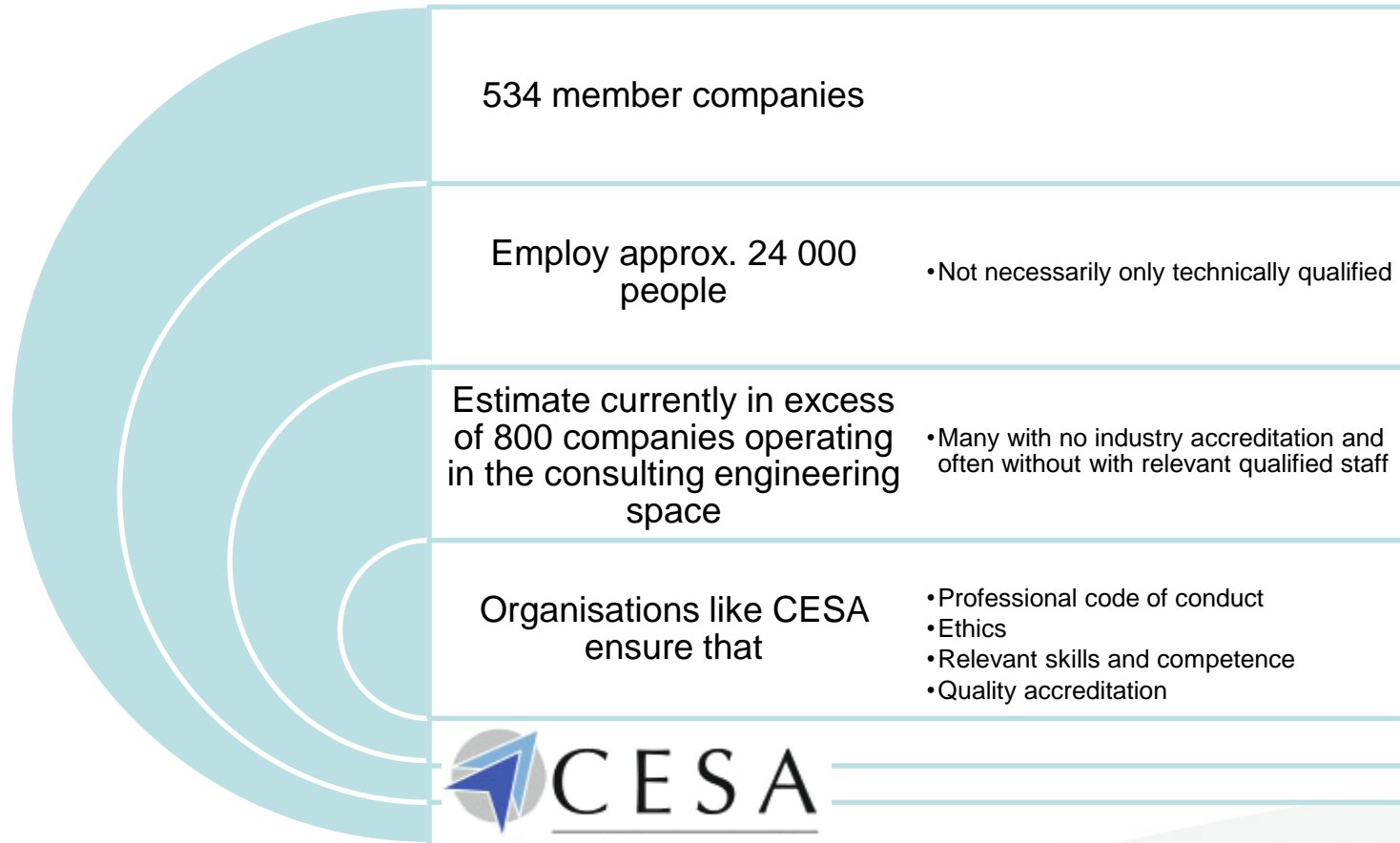
Embracing the
4th Industrial
Revolution and
the new world of
Digitisation

Working with
clients in
addressing
Corruption

FIGHTING CORRUPTION WITH LEADERSHIP

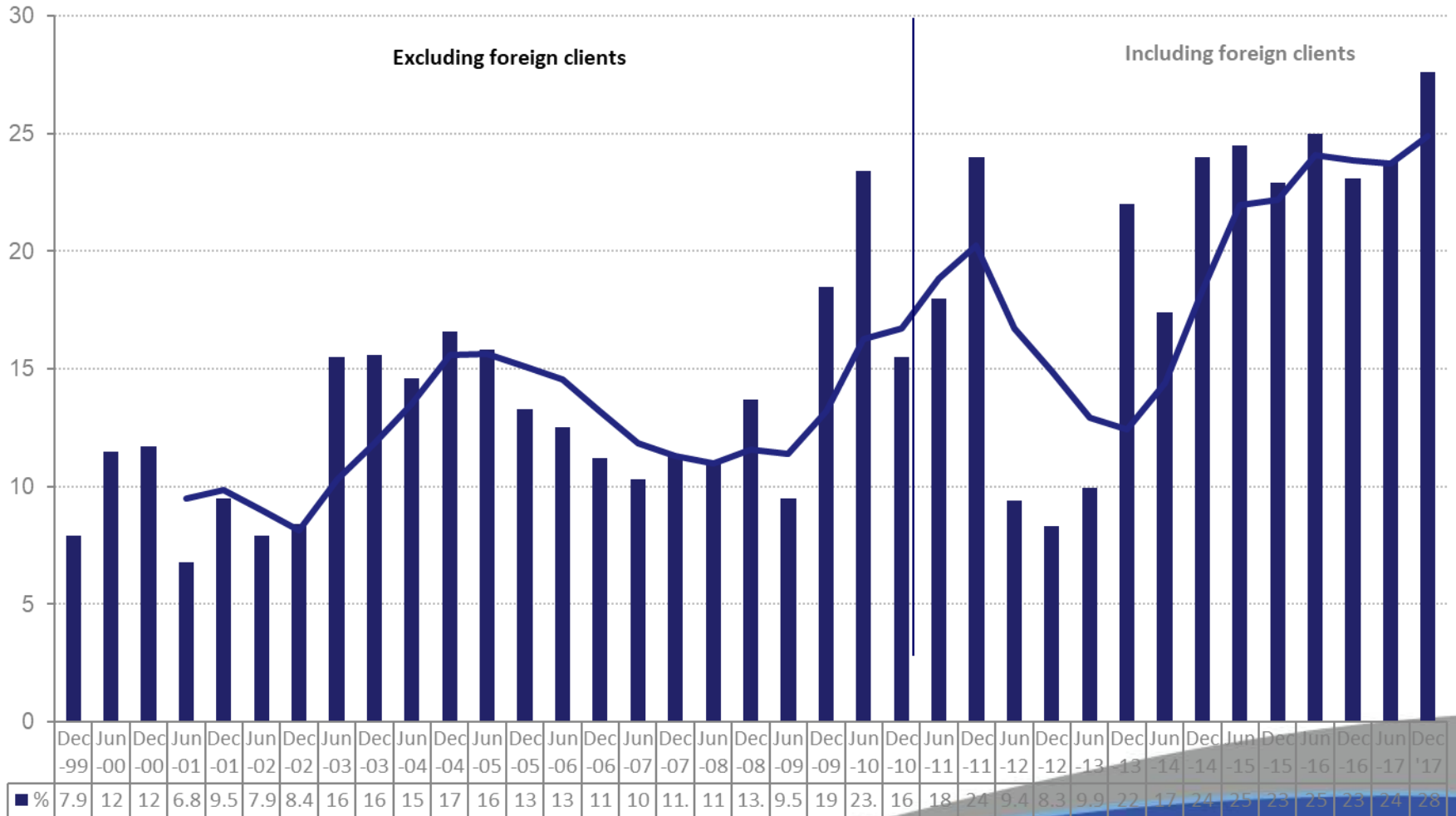


CONSULTING ENGINEERS SOUTH AFRICA



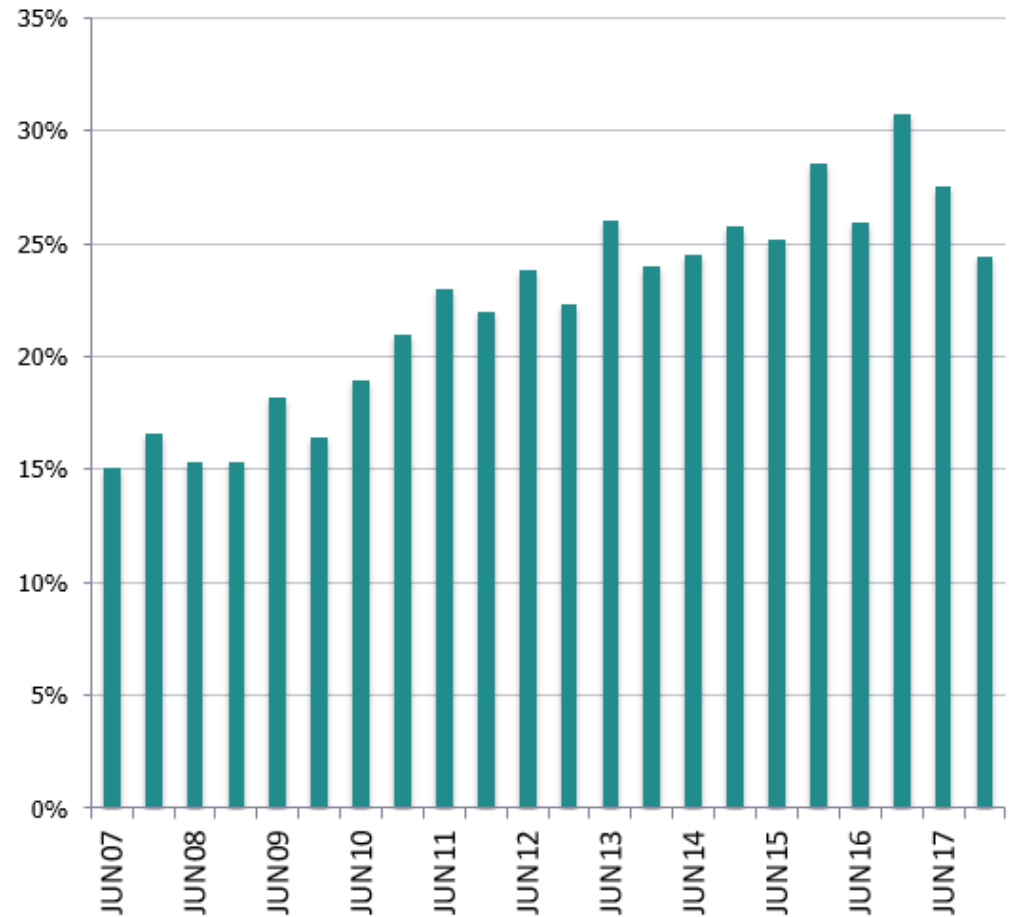
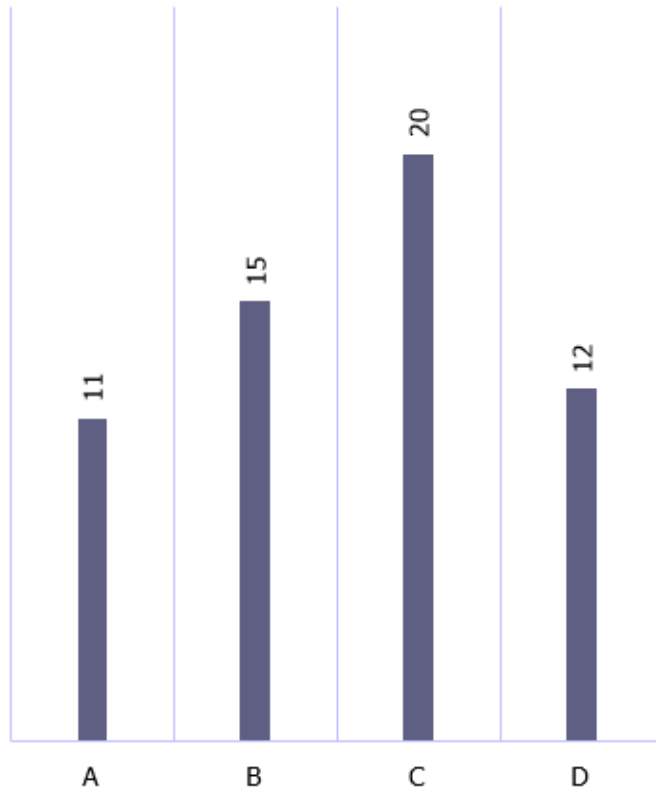
Total fee income outstanding for longer than 90 days

Percentage of total fee income earned



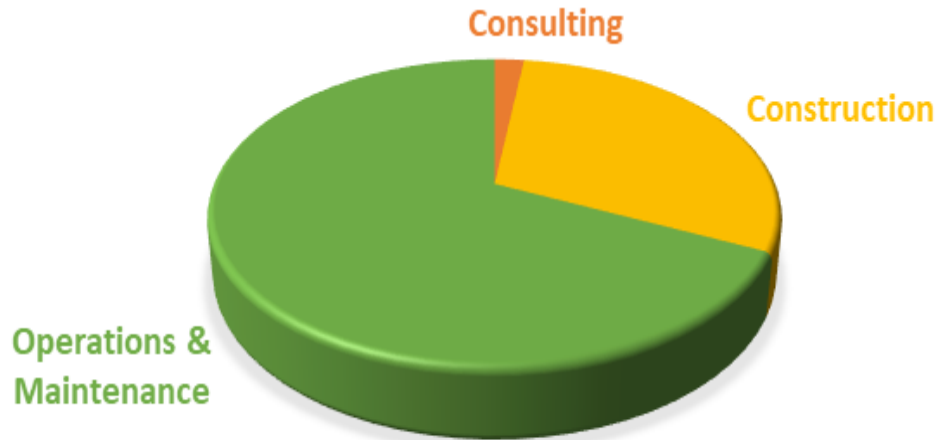
AVERAGE DISCOUNTING BY FRIM

BY FIRM CATEGORY



INFRASTRUCTURE ASSETS

FIGURE 1: LIFE CYCLE COSTS



- Question elaborate tendering for Services
- Value for Money vs Lowest Cost
- Attention focused on solutions to address Construction and the Operations & Maintenance

INDUSTRY CHALLENGES

Challenges

Lack of work

Retrenchments, downsizing

Reduced training, lack of internships

Emigration as other countries offer more opportunities

Migration away from our industry

Results in reduced competence in companies and clients

KEY 2018 OBJECTIVES

Procurement policy changes

- Questioning elaborate tendering for professional services
- Value based evaluation as opposed to lowest cost
- Framework agreements for certainty for work tenure

Balanced Workload

- Increased project pipeline based on increasing planning
- Stage gates approvals to either accelerate or stop projects
- Move away from feast or famine cycles in the Infrastructure industry

Client Competency

- Technical skills and competency in client departments
- Good understanding of roles and responsibilities to be played by all (Client team, Delivery team and Assurance teams)
- Infrastructure Directorate at Treasury for infrastructure decision making
- Presidential Advisory committee on Infrastructure

OUR PROGRESS

Media has been briefed on the theme and objective

Have been featured in the Sunday Times and various other news papers and journals

Have been Interviewed live on Radio and using other social media platforms

Have started a concerted campaign in Infrastructure Journal, Engineering News, Contractor and most recently Financial Mail


We entered into dialogue with the Parliamentary Appropriation's Committee

Have Met with ECSA, SATABCO, SAICE and BBBCBE in a bid for broad industry collaboration


Have met the National Treasury – office of the Chief Procurement officer, SIPDM and IGR as well as the Auditor General's Office and Infrastructure team

Have met with the Minister of Education

OUR PROGRESS

- Working with industry organisations (ECSA, SABTACO, BBCBE, SAICE)
 - Working with client organisations (ACSA, SANRAL, TRANSNET)
 - Working with Government (National Treasury and Auditor Generals Office)
 - Human Rights Commission on Water issues in the Vaal
 - MOU with COGTA and MISA to address challenges at Municipalities
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TRANSFORMATION

- Demographic - embracing differences between us and being considerate and respectful regardless of race or religion
 - Gender – address the inclusivity and consideration and agree to the freedom of choice that our democracy allows us all
 - Age – There industry requires a relook at how young and older engineers interface to create a sustainable industry
 - Accepting new business models and new ways of offering sustainable engineering services
 - Technology - new ways of working, new tools, greater automation and reliance on AI
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OUR WORLD IS CHANGING

WORLD POPULATION

7,572,737,939 Current World Population

108,237,382 Births this year

200,748 Births today

44,831,090 Deaths this year

83,148 Deaths today

63,406,291 Net population growth this year

117,600 Net population growth today



“Resource constraints continue to push the need for effective sustainable solutions in the face of growing urban pressures”



DIGITAL DISRUPTION

- Advanced analytics and AI
- Asset management using Sensors and information collected
- Robotics & 3D Printing
- 5D Building Information Modelling (BIM)
- Online document control and data management

Gauteng launches its first drone programme: here's what they're being used for

Staff Writer 21 May 2018



THE CONSTRUCTION INDUSTRY IS RIPE FOR DISRUPTION

Large capital projects typically take



20% longer to finish...

...and are up to



80% over budget,

and R&D spending in construction runs well behind other industries.



Construction



Auto



Aerospace

Note: Figure represents average percent of revenues

PRODUCTIVITY

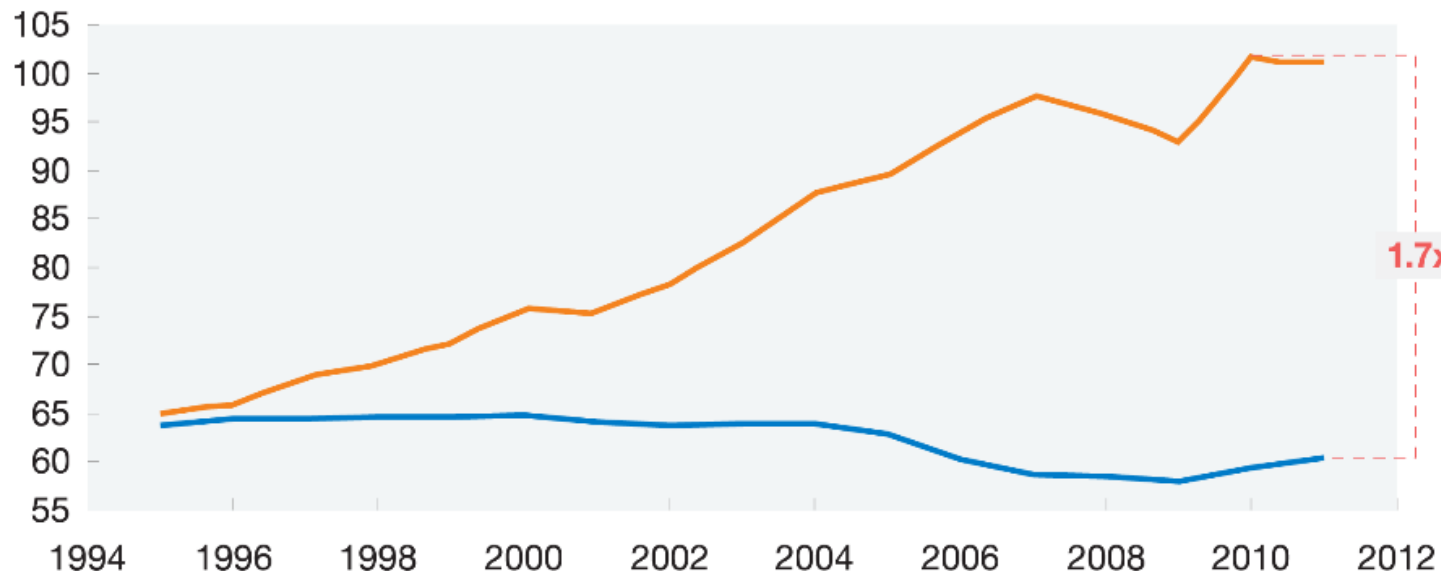
Productivity in manufacturing has nearly doubled, whereas in construction it has remained flat.

Overview of productivity improvement over time

Productivity (value added per worker), real, \$ 2005

— Manufacturing
— Construction

\$ thousand per worker



Source: Expert interviews; IHS Global Insight (Belgium, France, Germany, Italy, Spain, United Kingdom, United States); World Input-Output Database

SHAPING OUR INDUSTRY POSITIVELY



WAY FORWARD

Capacitation of client organisations, initially by secondment, thereafter permanent placement of Skilled technical professionals

Ensure that Treasury and AG hold non compliant client organisations accountable for over-expenditure, non-performance and mal-administration

Focus procurement policies to incorporate Value for money considerations as opposed to Lowest cost

Transform our industry – Demographically, gender, age and technologically

IN CONCLUSION

