



C E S A

Consulting Engineers South Africa

**YOUR PARTNER IN ENABLING
CONSULTING ENGINEERING
EXCELLENCE**

**LET'S TALK
TRANSFORMATION!**

Lynne Pretorius, Pr.Eng



LET'S TALK TRANSFORMATION

□ Facing the numbers

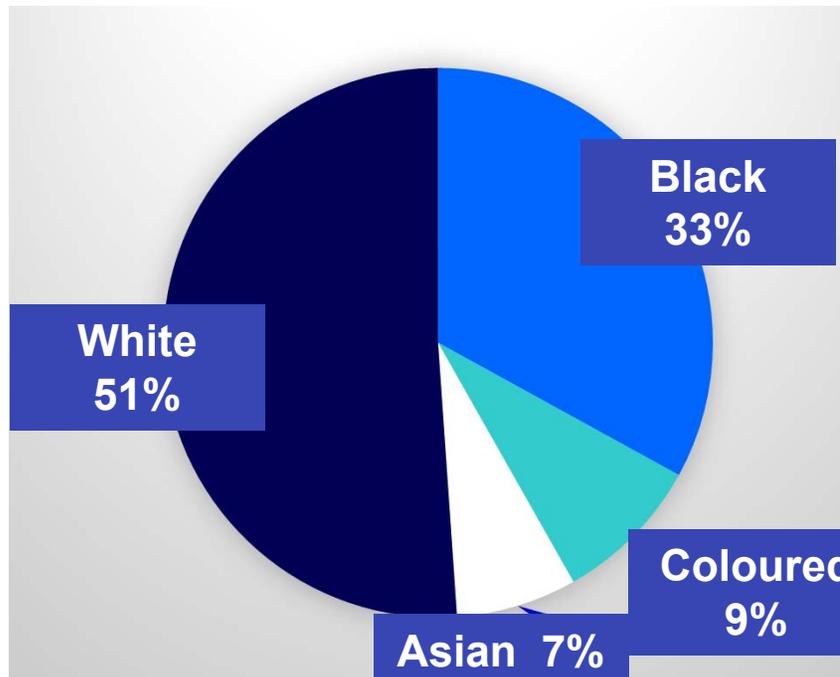
□ CESA's Approach

#FEES MUST FALL

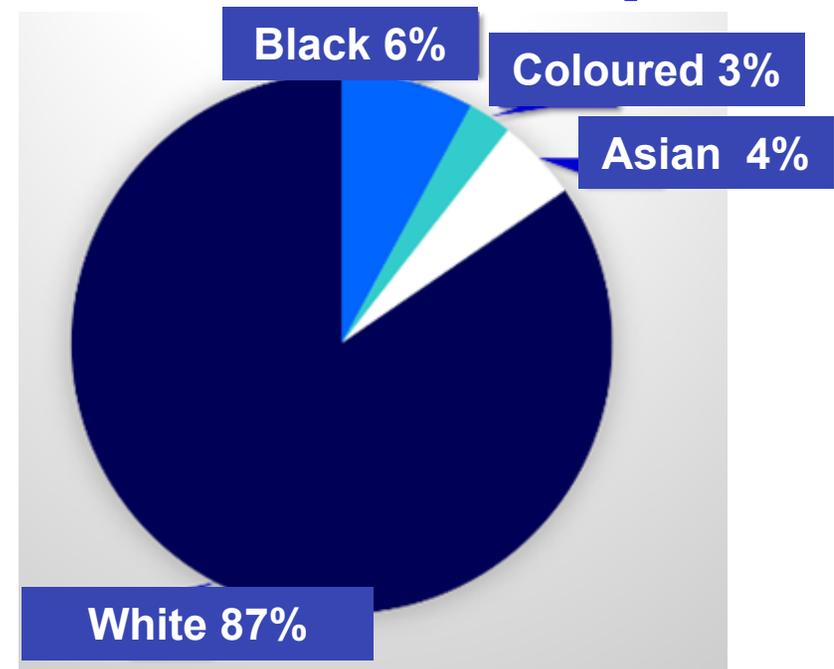


FACING THE NUMBERS

Profile of the CESA membership



Profile by race

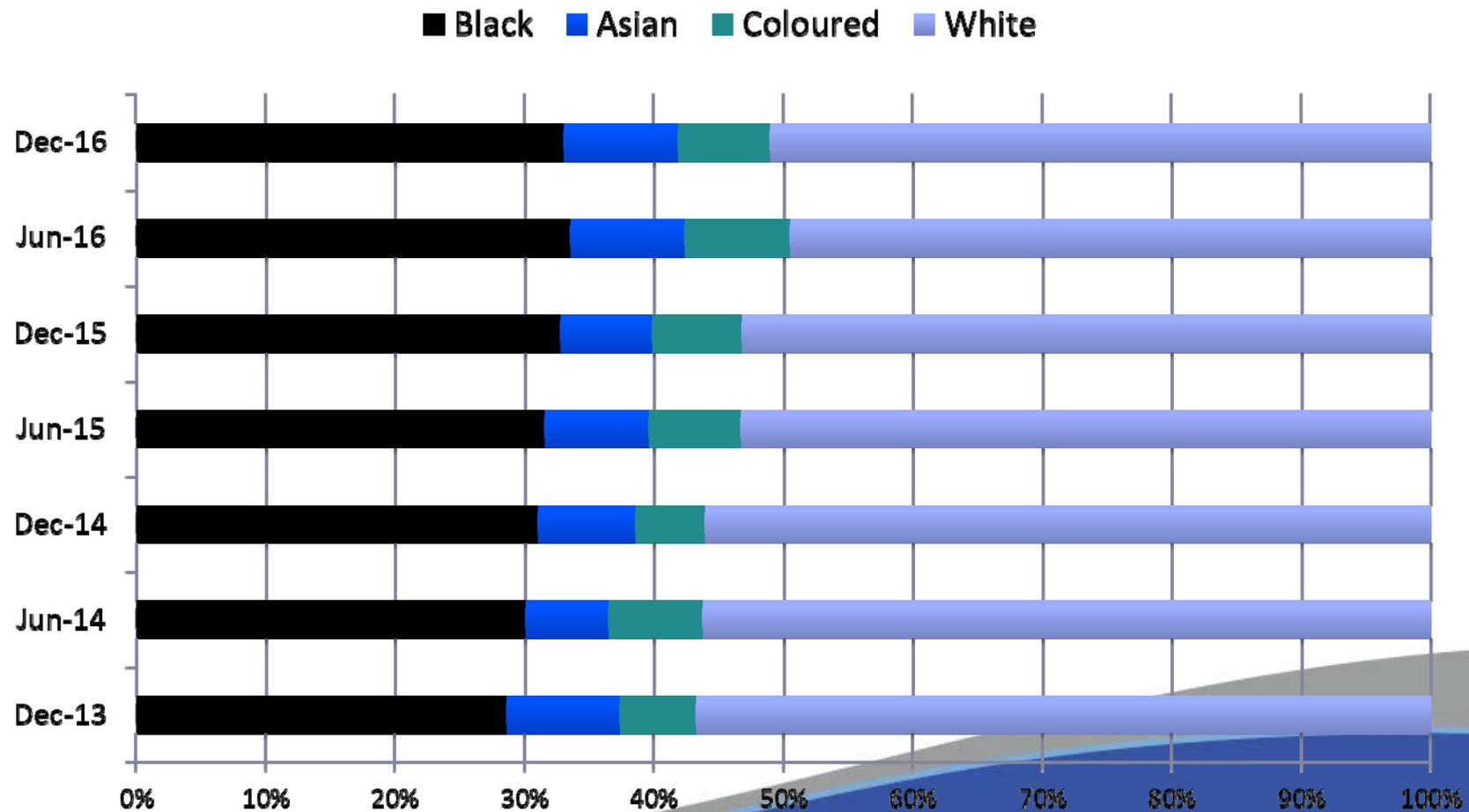


Profile of Professional Engineers by Race

Source: CESA, Bi-annual Economic and Capacity Survey December 2016

FACING THE NUMBERS

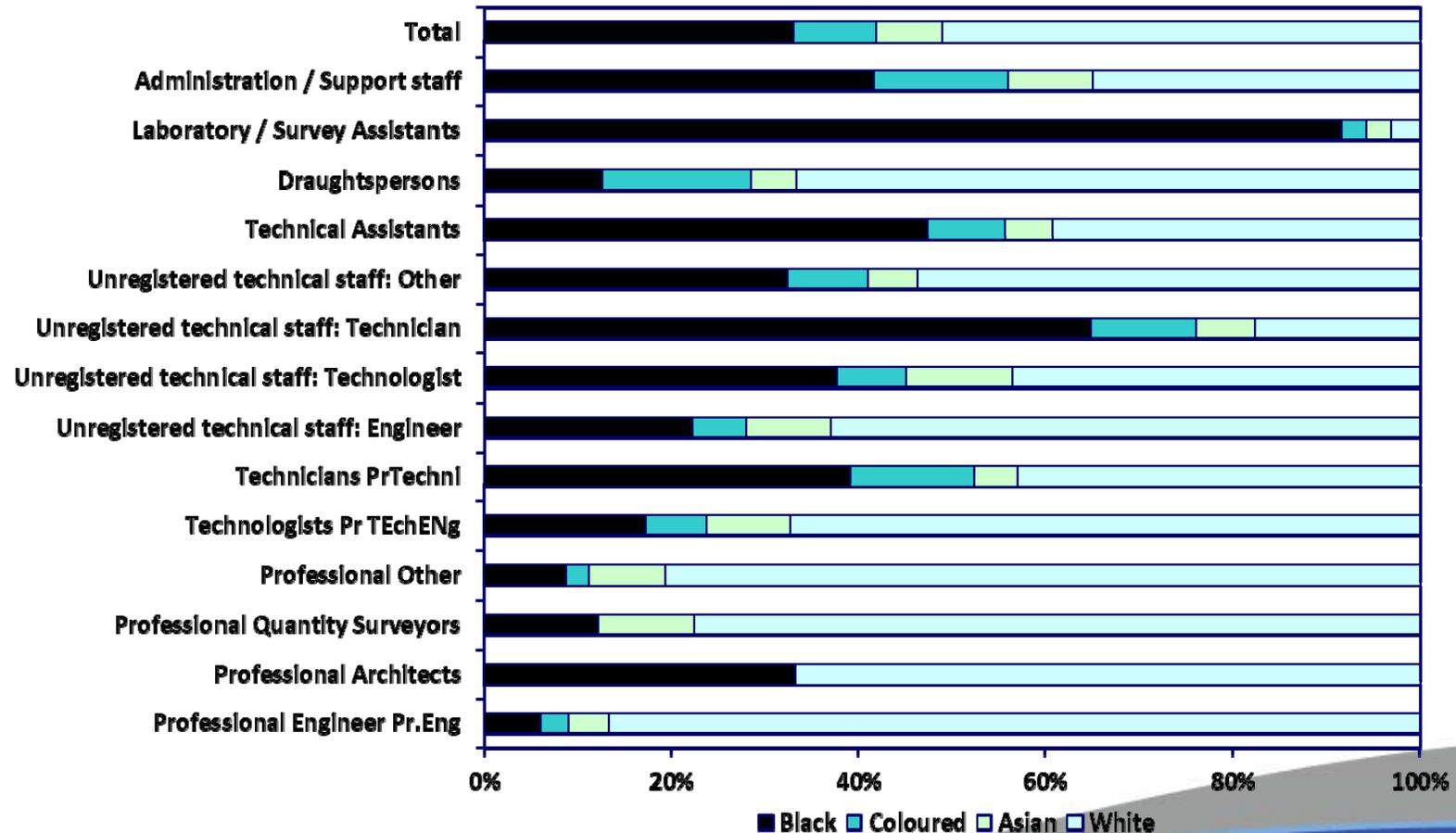
Overall Employment Breakdown, by race



Source: CESA, Bi-annual Economic and Capacity Survey December 2016

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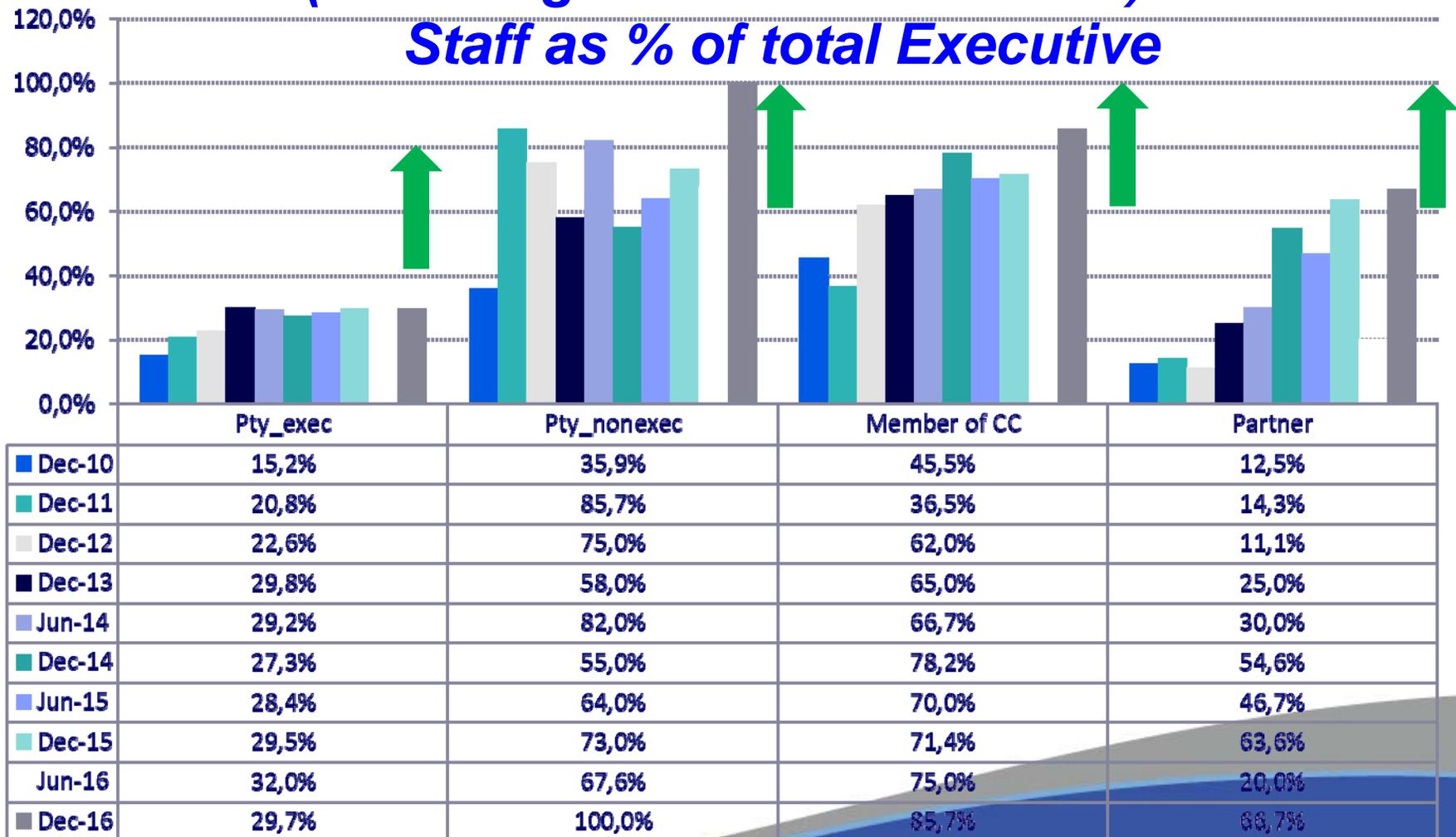
Employment breakdown



Source: CESA, Bi-annual Economic and Capacity Survey December 2016

FACING THE NUMBERS

Black (including Asian and Coloured) Executive Staff as % of total Executive



Source: CESA, Bi-annual Economic and Capacity Survey December 2016

FACING THE NUMBERS

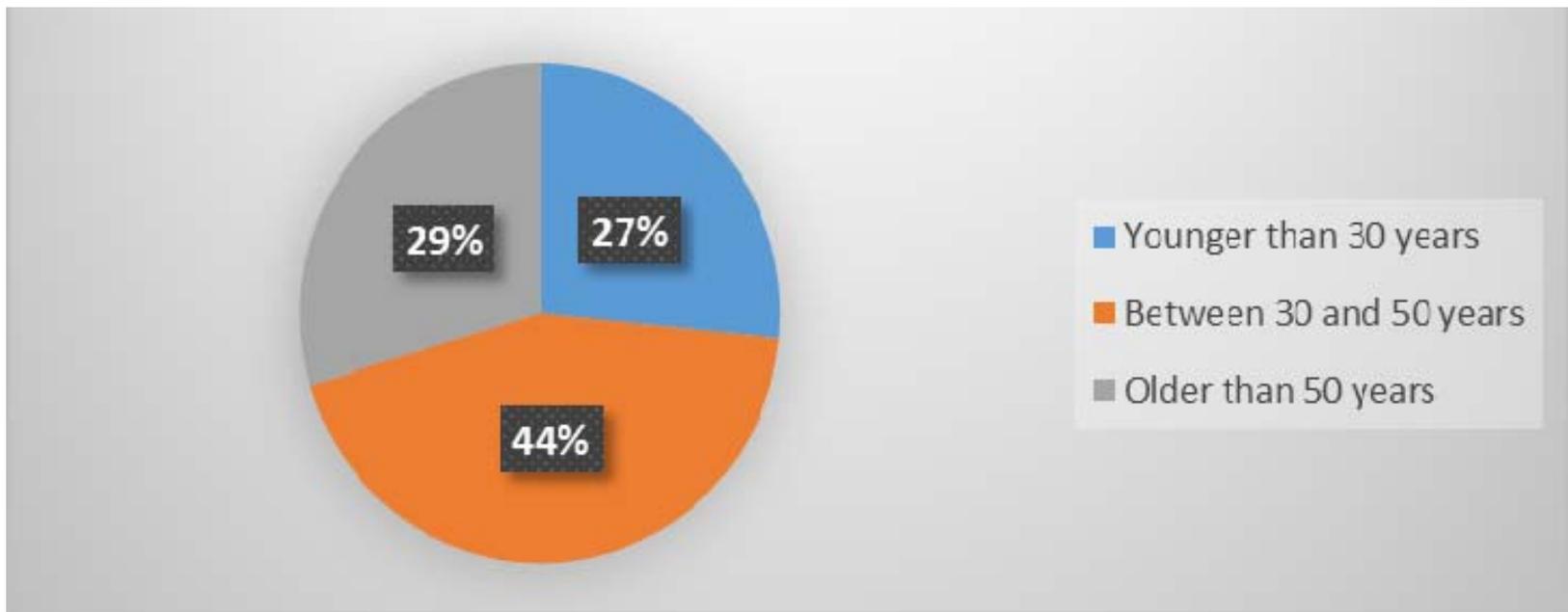
Breakdown of CESA membership

ANNUAL DECLARATION PARAMETERS	SIZE OF FIRMS		
	LARGE	MEDIUM	SMALL
	> R35M	R11.5m < x < R35m	< R 11.5m
No of firms	28	132	373
No of employees	all > 100	30-100	1-30
BBBEE	2-6	1-7	1-8
No of Black-owned > 51%	1	22	99
% black-owned	23%		
% of firms with black ownership > 51%	0.19%	4.13%	18.57%
Non-black owned < 51%	27	110	274
% of firms ito size of firms	5%	25%	70%

Source: CESA Membership Database, December 2016

FACING THE NUMBERS

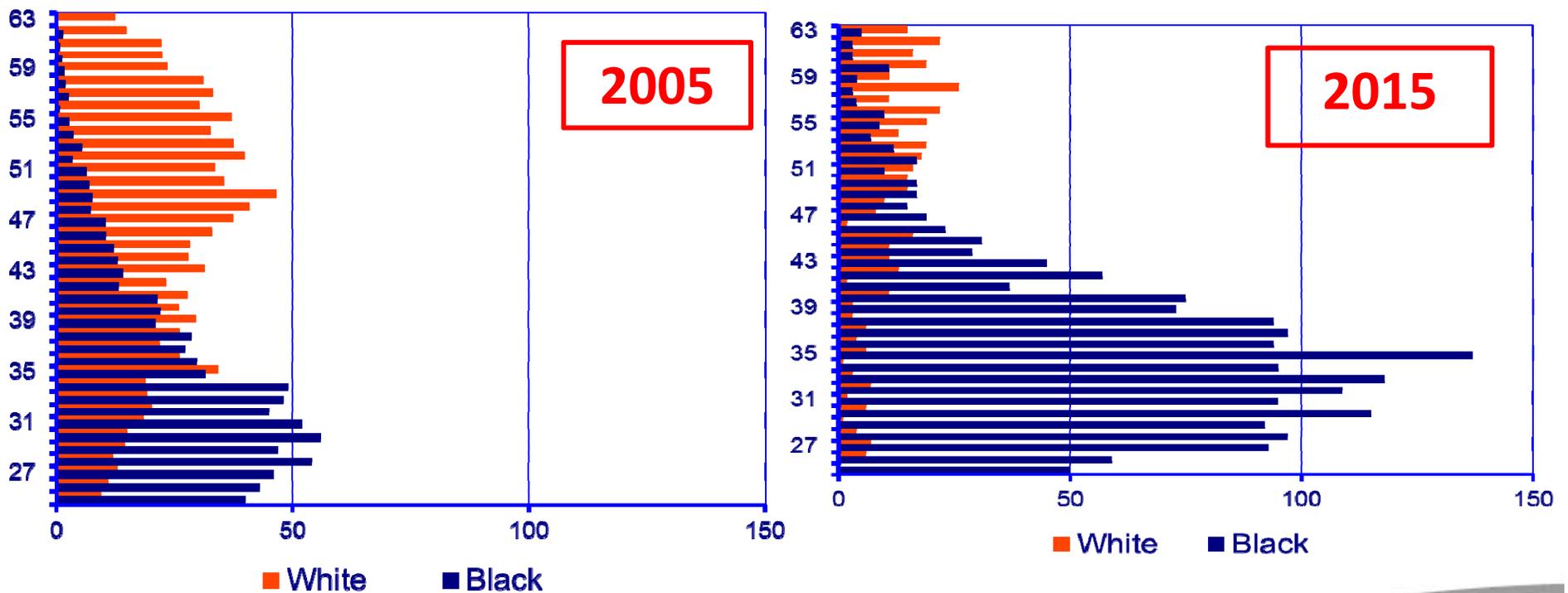
Average age of engineering professional = 38 years



Source: Engineering Council of South Africa, National Engineering Skills Survey, December 2013

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Local government – civil engineering expertise lost

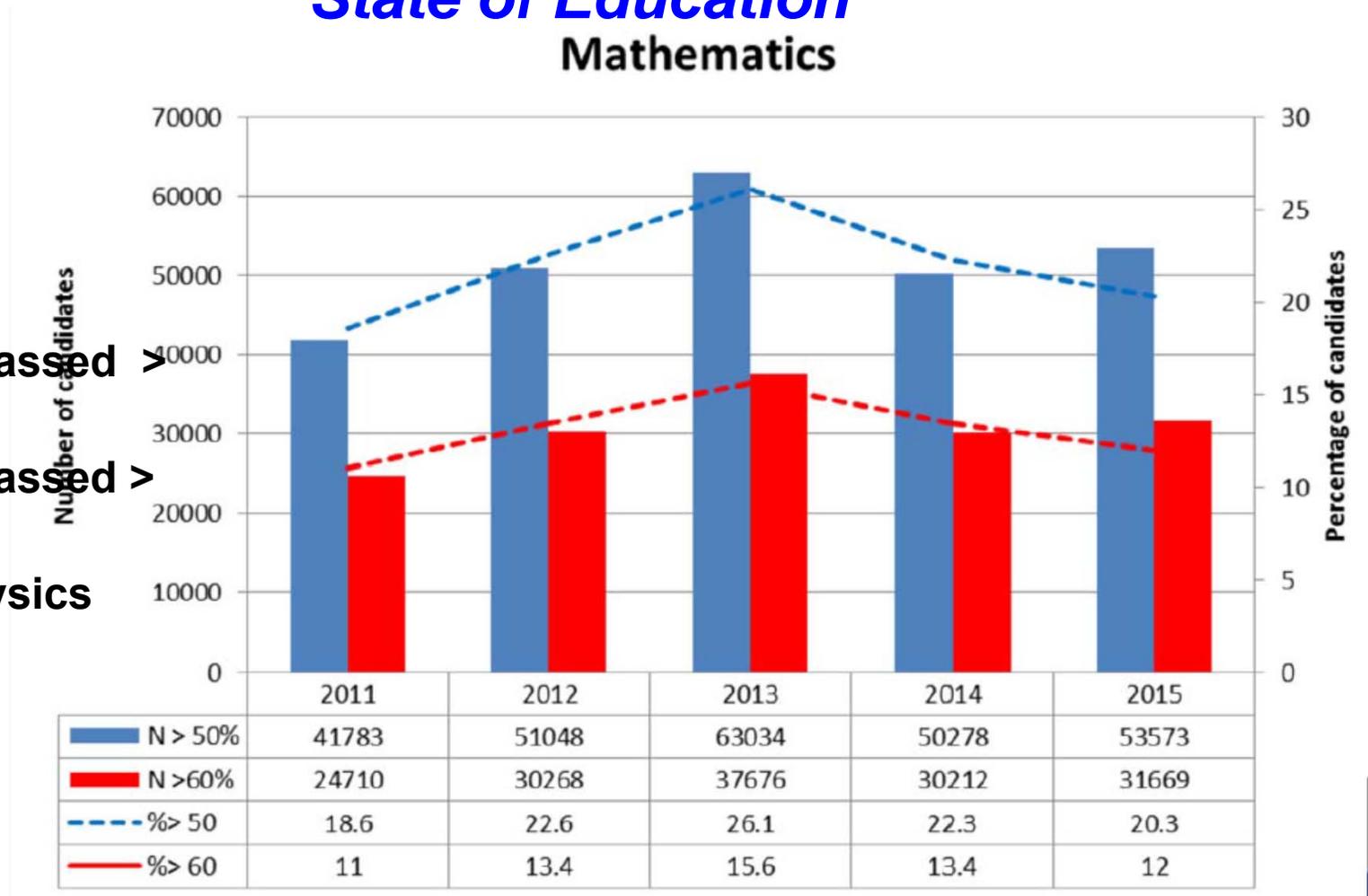


Source: Dr Allyson Lawless, Numbers And Needs In Local Government – Update 2015, paper presented at the IMIESA conference, October 2016

FACING THE NUMBERS

State of Education Mathematics

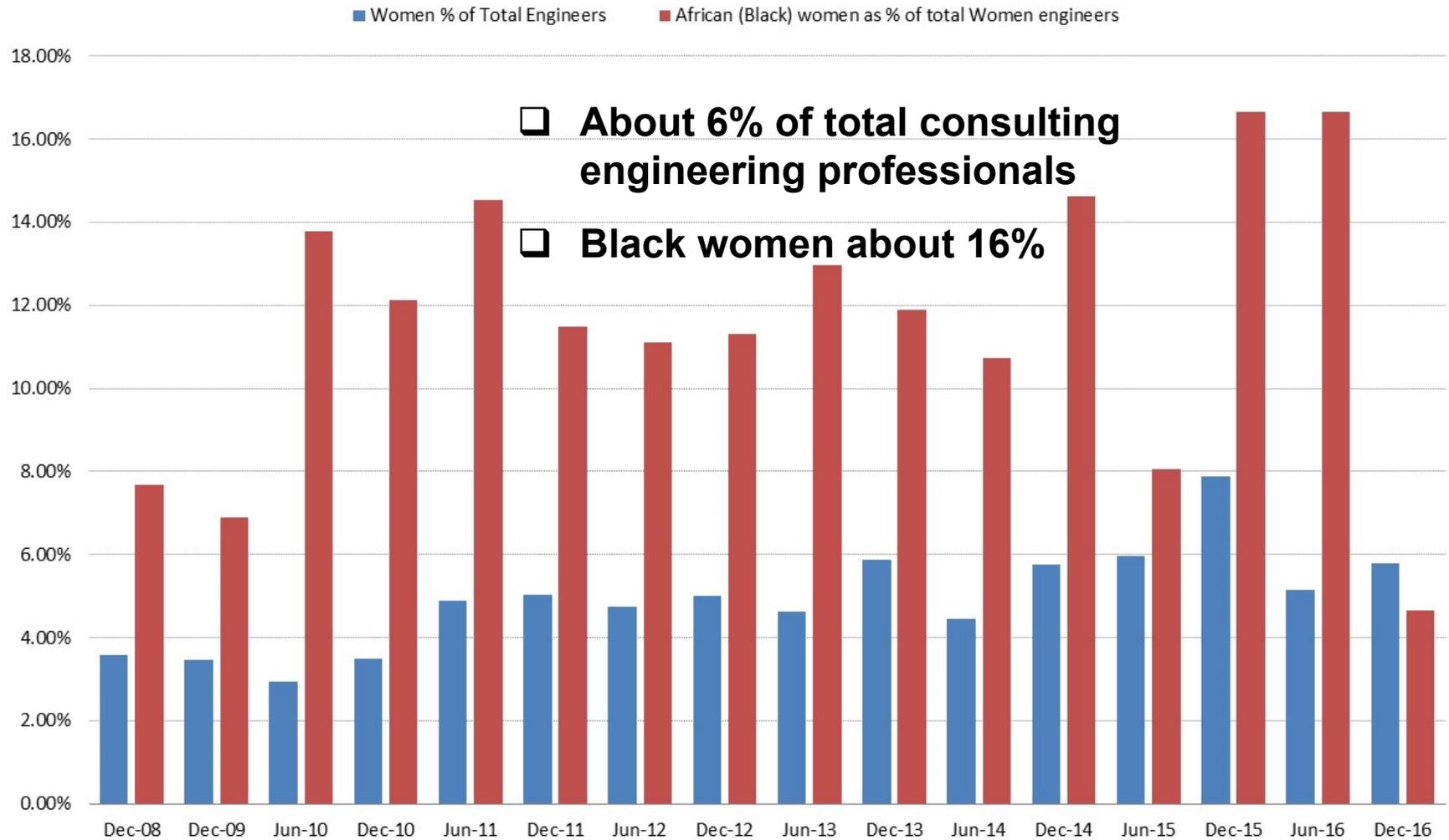
- About 20% passed > 50%
- About 10% passed > 60%
- Same for Physics



Source: Trends in International Mathematics and Science Study South Africa, Matric: Better or worse?

FACING THE NUMBERS

The changing role of female ENGINEERS in the South African private consulting engineering industry



Source: CESA, Bi-annual Economic and Capacity Survey December 2016

FACING THE NUMBERS

□ Summary

- Limited amount of learners with adequate maths and science competence.
- CESA has limited information to track progress regarding transformation
- Ave age of engineering professionals is 38 years.
- Significant progress made in public sector
- Mentoring is a concern
- Overall sustainable development of all young engineering staff

CESA's APPROACH

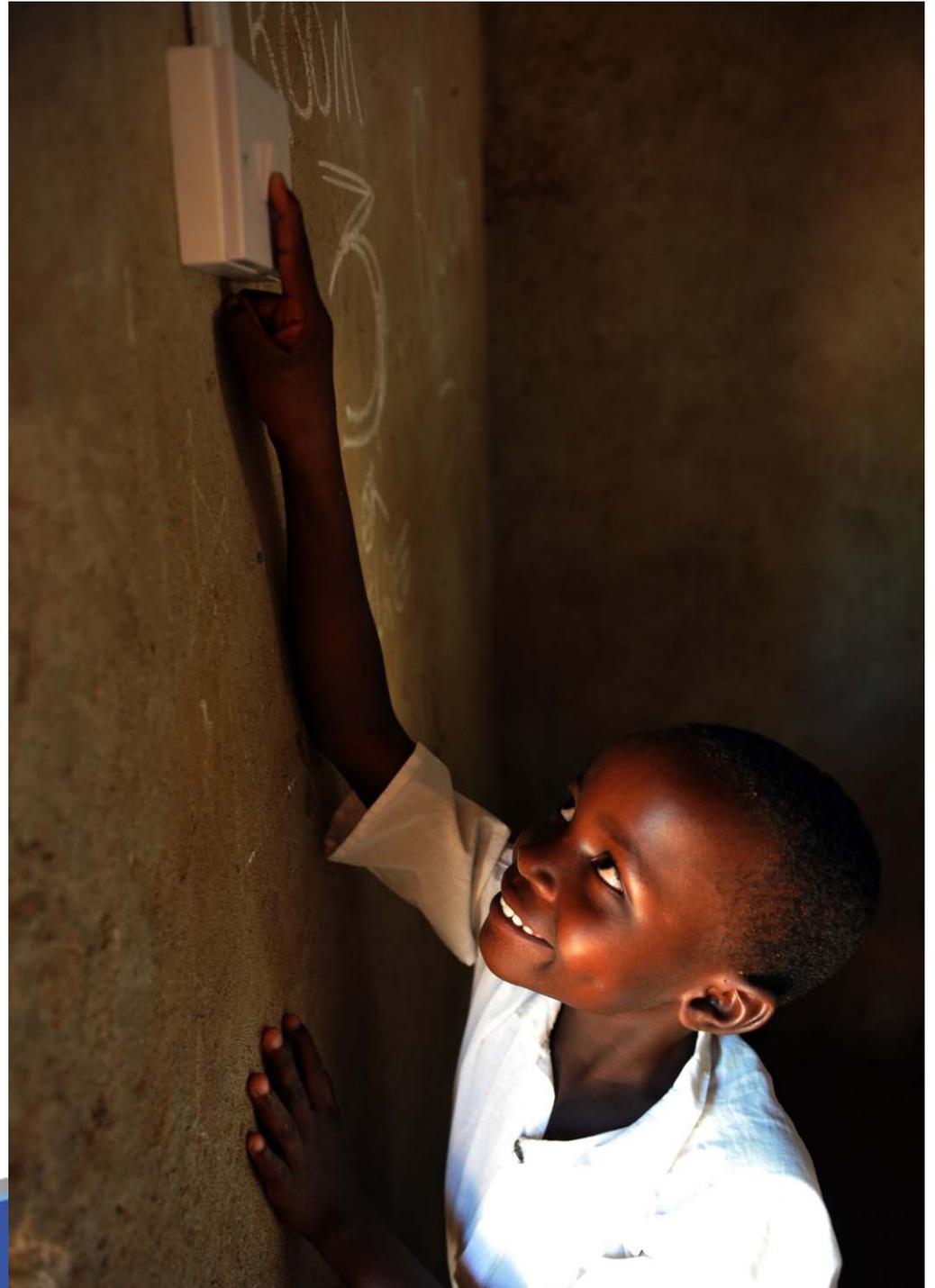


Transformation is good business

- Ethical approach**
- Part of sustainable business growth strategy – grow the next generation of engineering staff**

CESA's objectives

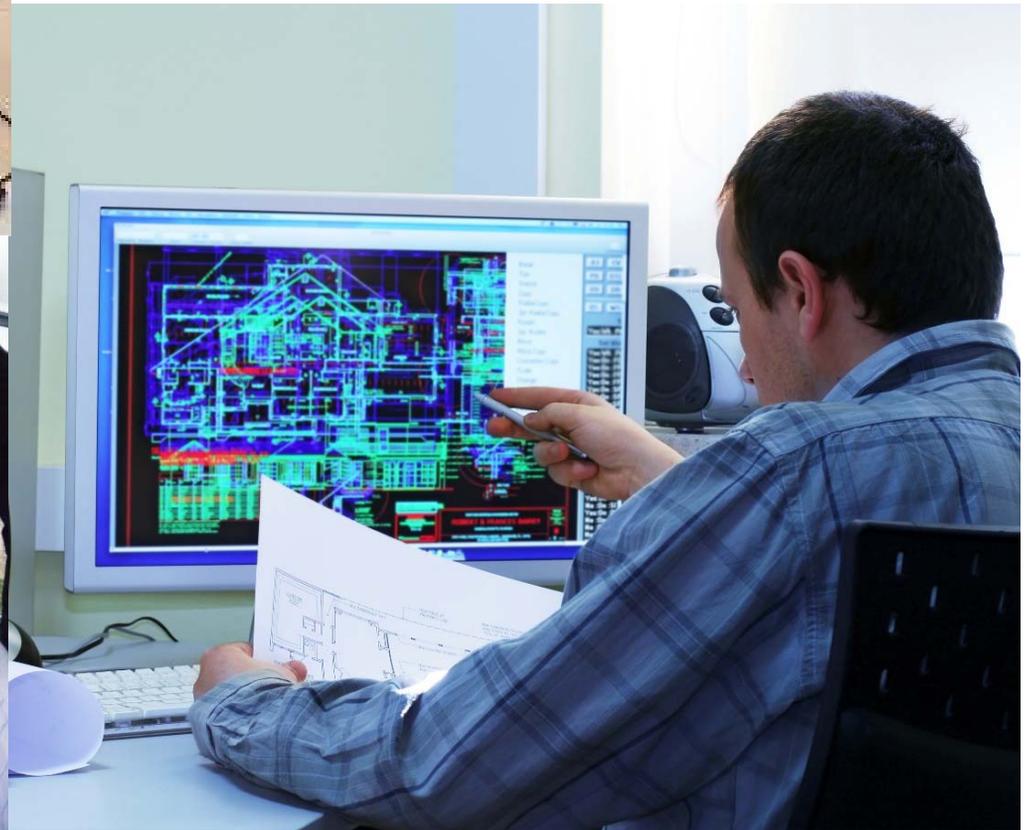
- Increased participation of black and female engineering staff/ professionals at various levels of member firms.**
- Transforming CESA's membership profile**
- Sustainable growth and development of consulting engineering staff in private and public sector**



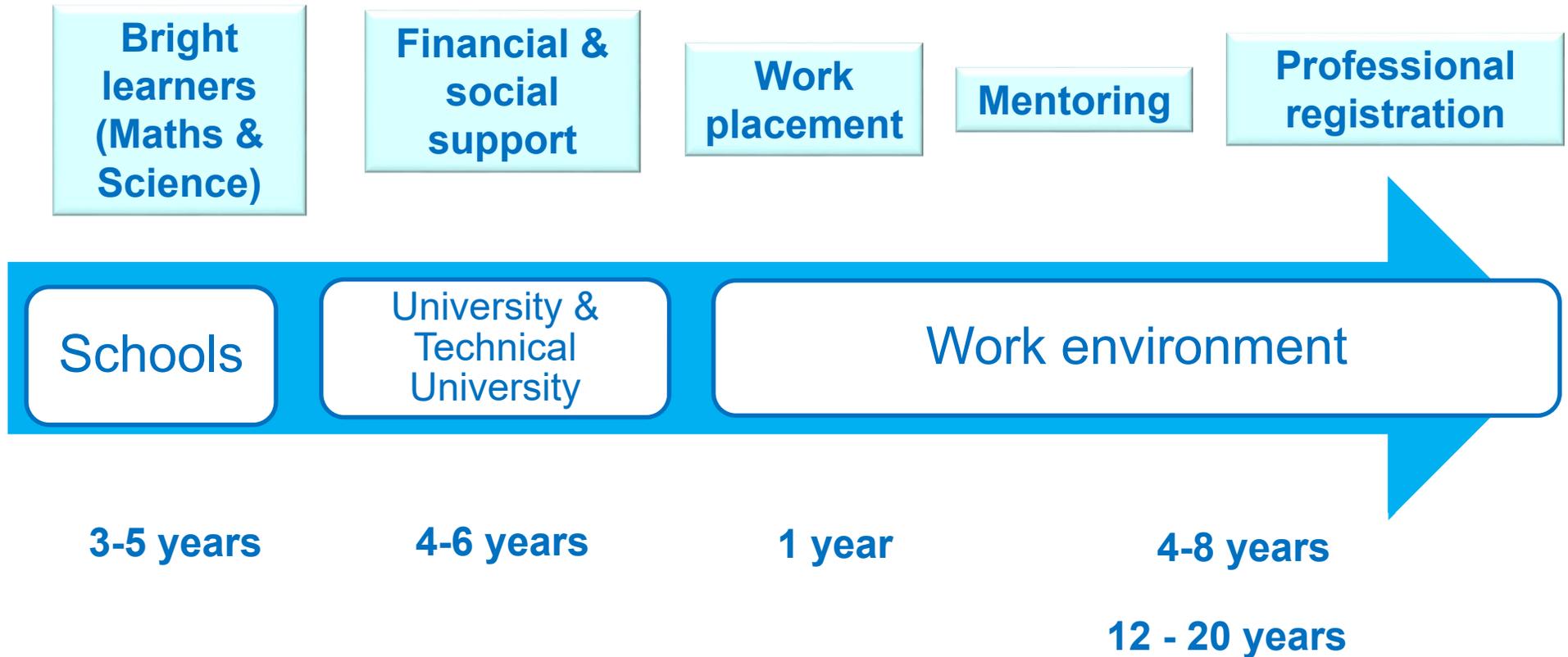
CESA's APPROACH



Get young engineering staff professionally registered



CESA's APPROACH



Get young engineering staff professionally registered.

CESA's APPROACH



Support to small and medium size business

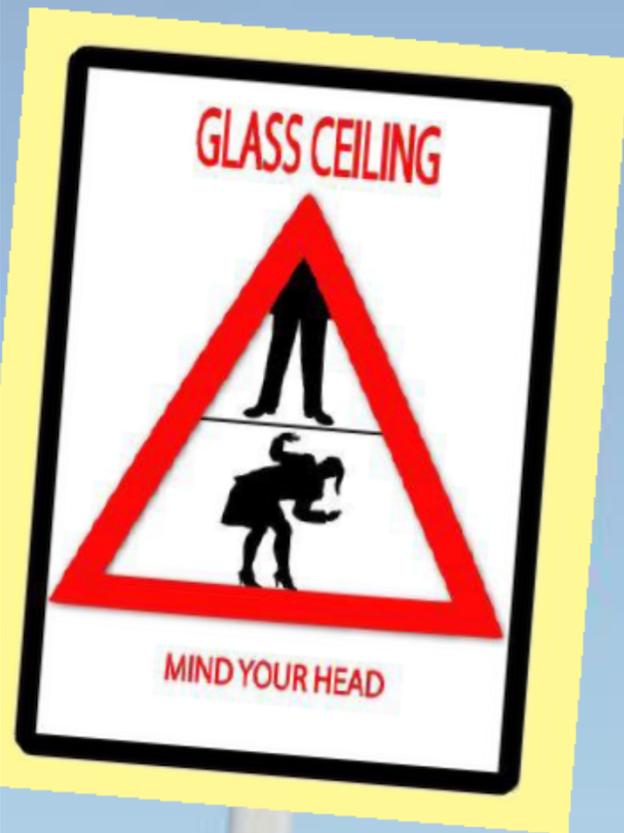
- No one size fits all approach**
- Incubation program for start-up businesses**
- Reduced fees over start-up period**
- Database of emerging firms**
- Opportunities within joint ventures and sub-consulting agreements**

CESA's APPROACH

Mentoring

- ❑ Member firms to partner with public sector bodies – training in private sector
- ❑ Role of retired engineers – private and public sector mentoring
- ❑ CESA School – Business of Consulting Engineers





CESA's APPROACH

Breaking the Glass Ceiling

Women in Engineering

“unacknowledged barrier to advancement in a profession,”

“70% of women who graduate with engineering degrees, are lost when they start working due to isolation”

CESA's APPROACH

- Male-dominated culture
- Unproductive employees
- Negative stereotypes
- Quota label
- Gender wage gap



CESA's APPROACH

- ❑ Develop programs around diversity management
- ❑ Gender-related discussions should form part of mainstream transformation discussions
- ❑ Launch of CESA's Women's Forum



CEESA's APPROACH

ATTRACT & RETAIN

Acknowledge and address barriers

- Poverty & affordability
- Cultural differences
- Role of language
- Work-life balance
- Corporate culture
- Patriarchal society

CESA's APPROACH

IMPROVED MONITORING

Annual declaration forms expanded to include staff demographics





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