

A large passenger airplane is flying in the sky above an airport terminal. The sun is setting in the background, creating a warm glow. The terminal building is modern with a glass facade and a curved roof. The sky is clear and blue.

GLOBAL AVIATION GENDER SUMMIT 2018

BARRIERS AND ENABLERS – EDUCATION (STEM)

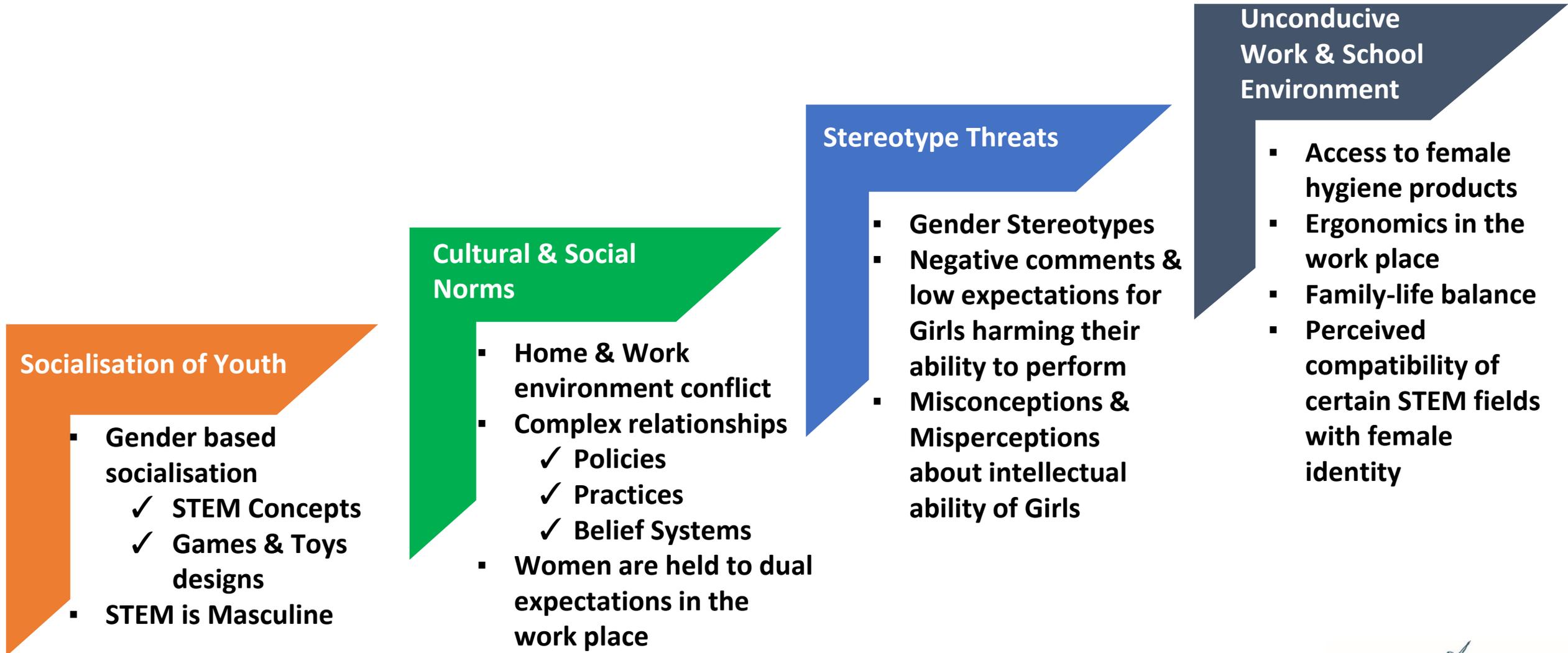
Dr Noxolo Kubheka-Dlamini

AUGUST 2018

The logo of Airports Company South Africa, featuring a stylized white figure of a person with arms and legs outstretched, as if running or jumping.

AIRPORTS COMPANY
SOUTH AFRICA

STEM BARRIERS



SEXISM

DISCRIMINATION

PATRIARCHY

PREJUDICE

Boys possess more innate STEM ability than girls.

Girls are bad at science and math.

STEM resources are available equally to girls and boys, why don't girls use them?

MYTHS

Fewer women than men have the very high levels of 'intrinsic aptitude' that STEM jobs require.

Classroom interventions that work to increase girls' interest in STEM run the risk of turning off the boys.

You have to code to be in technology.



STEM STATISTICS

Over 62 Million girls do not have access to education

Women make up less than 30% of the people working in STEM careers. The situation is worse in some countries in sub-Saharan Africa.

60% of South Africans do not have grade 12 certificate, preventing the growth of #STEM and #Skills



Only 11% of all engineers globally are female

Only 35% of higher education students studying STEM subjects are Women

Only 17 women have been awarded a Nobel Prize in physics, chemistry or medicine since 1903

There will be 7 million new STEM jobs in Europe by 2025 and not enough people to fill them



HIDDEN FIGURES



Katherine Coleman, 1918 (99 years)
African-American Mathematician

Taraji P. Henson



Dorothy Vaughan, 1910-2008
African-American Mathematician and
a self taught Computer Programmer

Octavia Spencer



Mary Jackson, 1921-2005
African-American Mathematician and
an Aerospace Engineer

Janelle Monáe

Hidden figures who served as the brains behind one of the greatest operations in the US history: The launch of astronaut John Glenn (Glen Powell) into orbit.

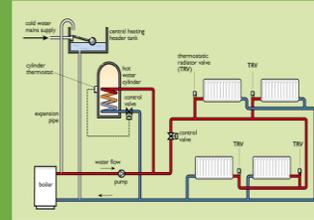
Dr Shirley Jackson

**Scientific Breakthrough Research
Fiber Optic Cables & Telephony**



Alice Parker

**Gas-powered central
heating in 1919**



Hedy Lamarr

**Wireless Transmissions
Technology in 1941**



Marie Van Brittan Brown

CCTV in 1969



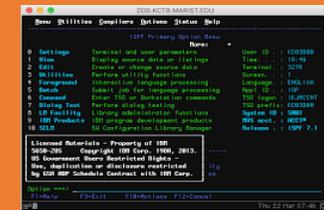
Dr. Maria Telkes

**Residential Solar Heating -
1947**



Dr Grace Murray Hopper

COBOL – 1959-1961



ECONOMIC IMPERATIVE FOR STEM EDUCATION

STEM has revolutionised every aspect of our lives and driven economic growth

The Female Millennial — The New Era of Talent
Work for companies with history of inclusion, diversity, and equality



STEM make up 75% of growing occupations

High performing countries are characterised by:

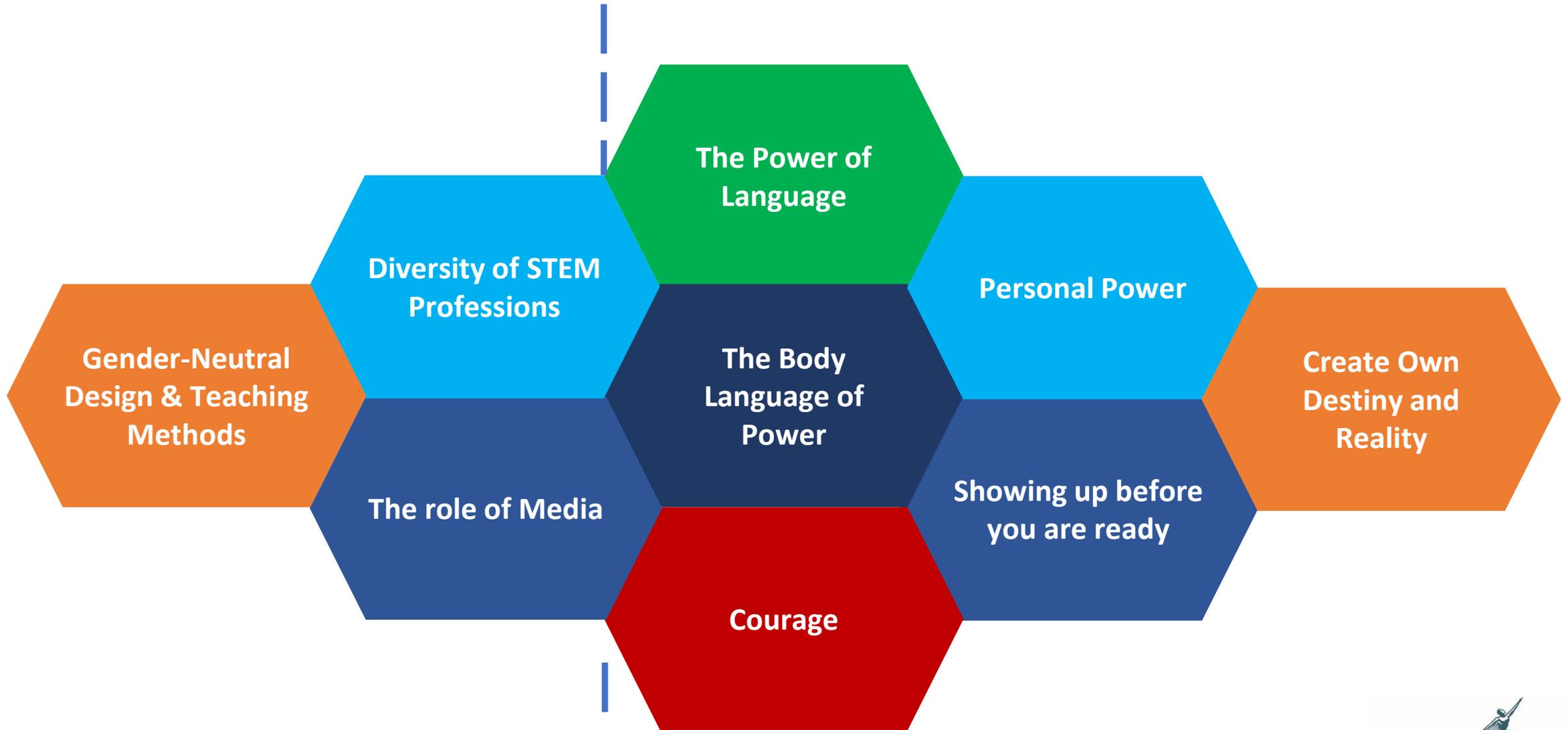
- STEM Literate Population
- Reliable STEM Pipeline

“As much as \$28 trillion, or 26 percent, could be added to the global GDP by 2025 if women played an identical role in formal labour markets to that of men.”

Clinton Foundation Research



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TECHNICAL INTERVENTIONS

QUALITATIVE INTERVENTIONS

Thank You