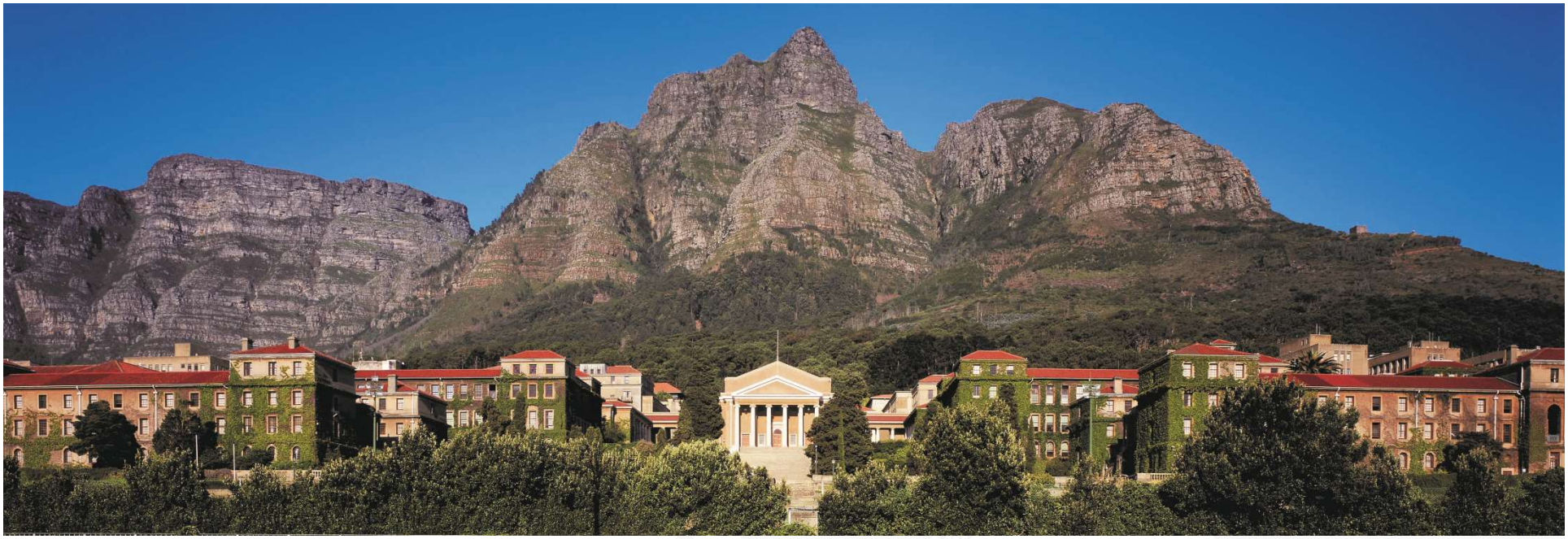

Bridging between industry and academia for medical device innovation

Africa Health 2019

Mr Francois Oosthuizen

UNIVERSITY OF CAPE TOWN
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Overview

- Global Perspective
- Innovate…but at what cost?
- Partnerships to the rescue
- Enabling instruments
- Challenges
- Conclusion

Disclaimer

- My talk today is my opinion
- Continuous learning is critical
- Open to engaging and finding new ways

Global Perspective

Setting the scene

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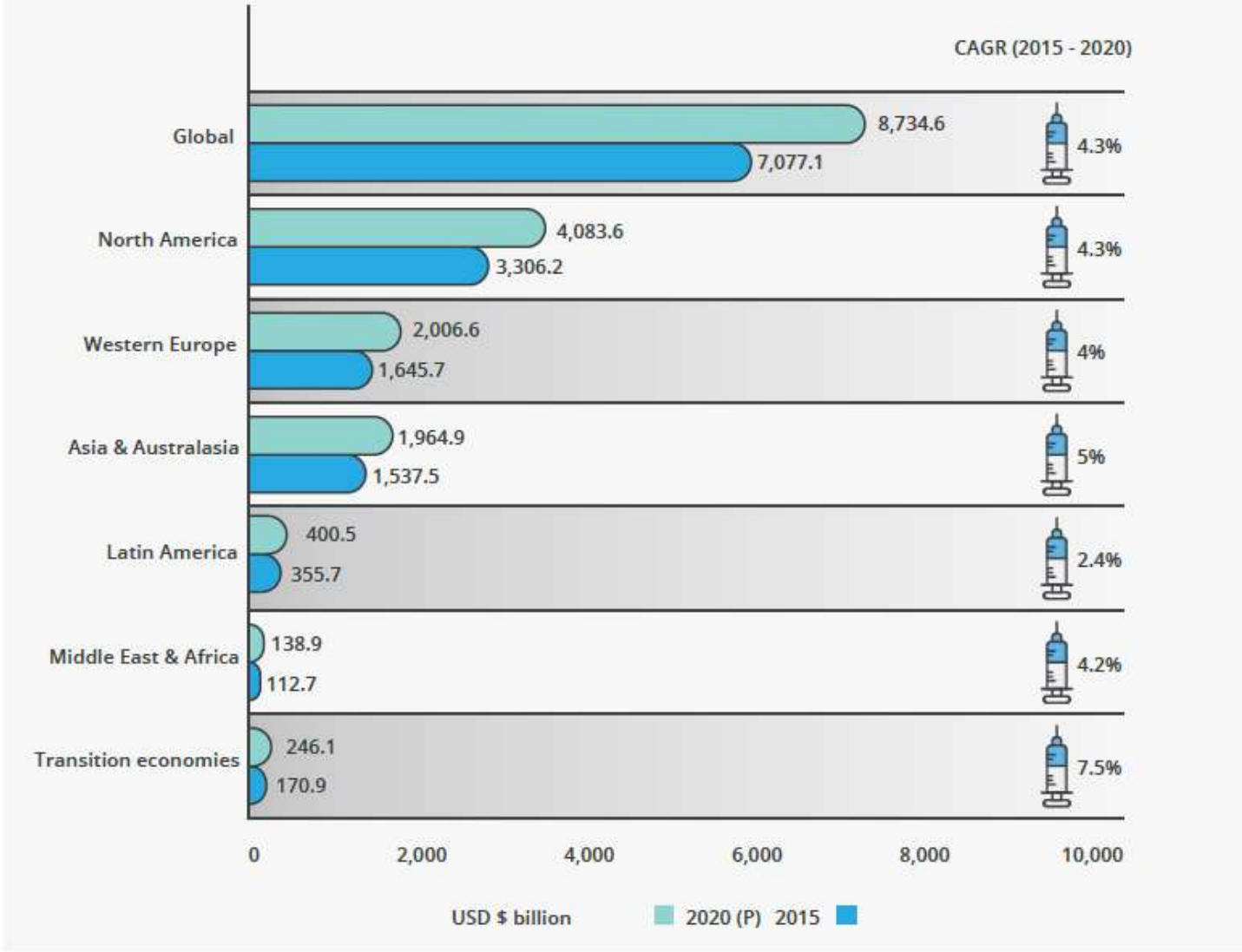
Global Spend on Health Care



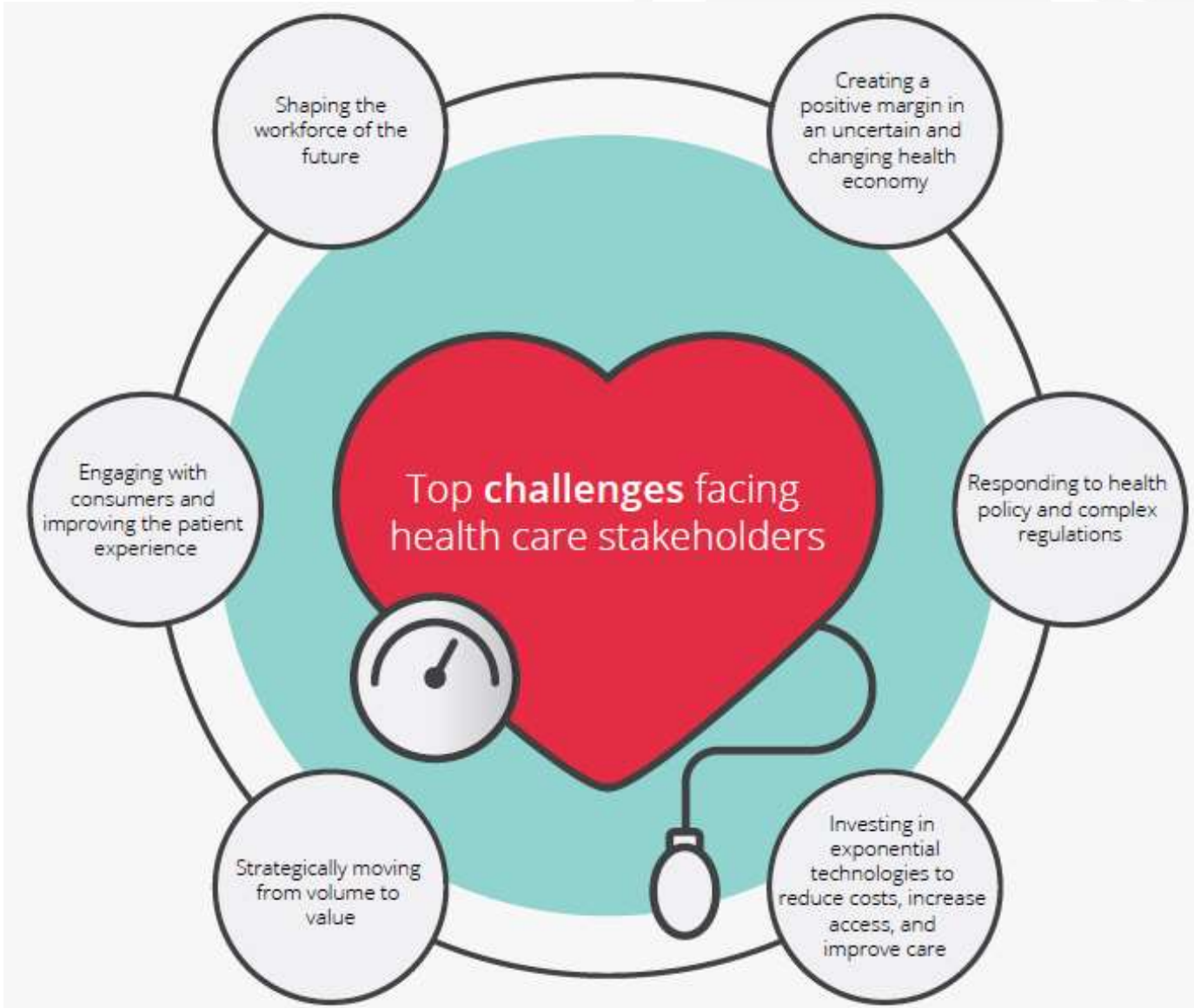
Source: World Industry Outlook, Healtcare and Pharmaceuticals, The Economic Intelligence Unit, June 2017

Global Perspective

- Global health care spending is projected to increase [1]
- Global health care spend varies greatly [1]
- General life expectancy is expected to increase [1]

Yet, at the same time:

- Major issues facing health care industry: Need to improve financial performance and operating margins [1]
- Revenue pressure and rising costs for health systems [1]
- This trend is predicted to persist [1]


Top challenges facing health care stakeholders
Shaping the workforce of the future
Creating a positive margin in an uncertain and changing health economy
Engaging with consumers and improving the patient experience
Responding to health policy and complex regulations
Strategically moving from volume to value
Investing in exponential technologies to reduce costs, increase access, and improve care

SO WHAT?

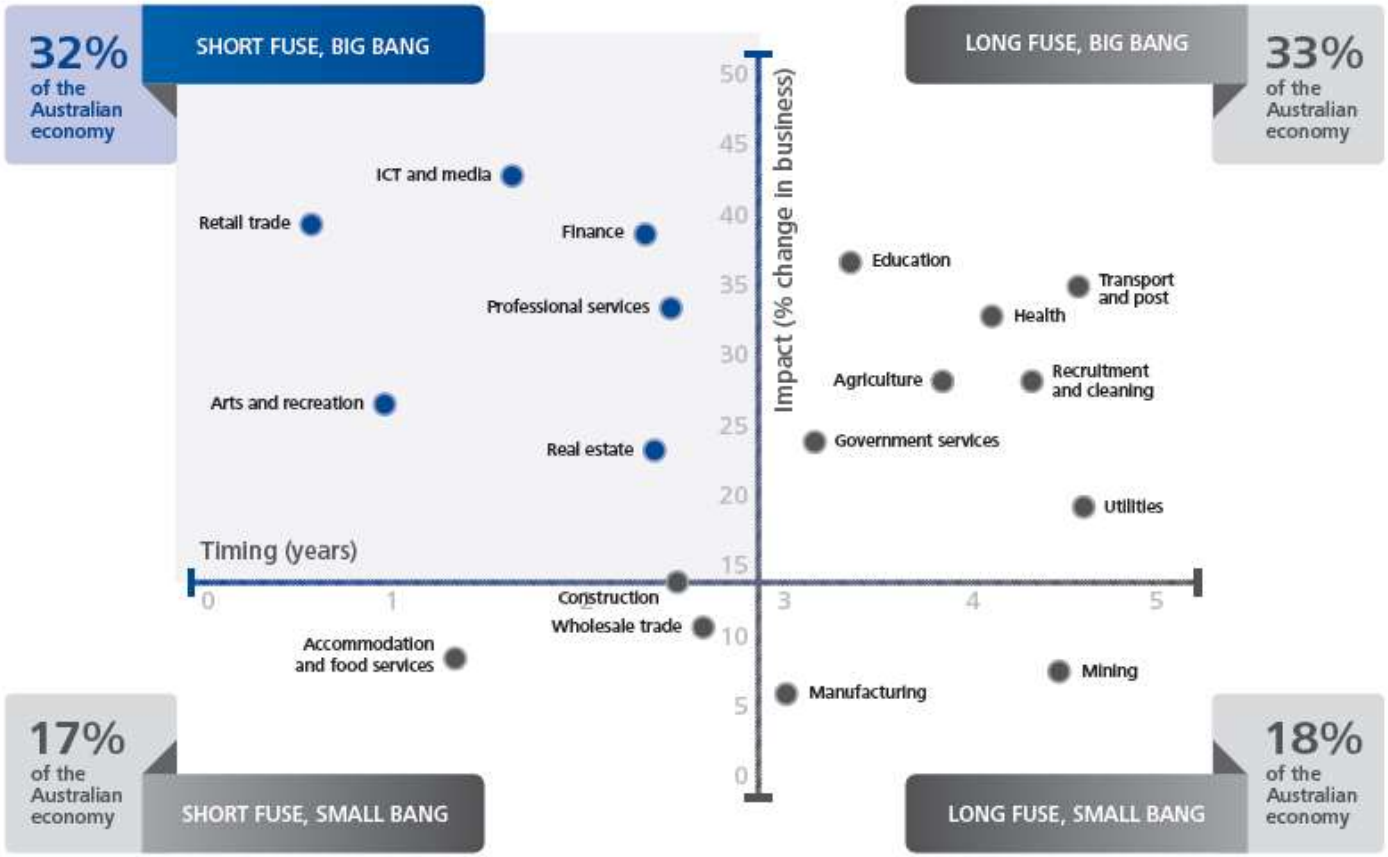
Why is this important to know for today?

The fuse and the bang?

- Deloitte study on digital disruption in main industry sectors:
  - the projected magnitude of disruption in various industry sectors
  - the likely timeline of this disruption
  - practical advice to leaders on how to pull together the right strategic responses.

- Note: Not unpack drivers for disruptions today; only use the information towards my perspective.

Deloitte's Digital Disruption Map



Stay Relevant…
Continuous Medical Device Innovation

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Innovation in Medical Devices?

- Organisations will need to innovate to stay relevant and competitive
- Important to realise that organisations will probably need to innovate in many aspects of their business
- Successful innovation is not necessarily money-expensive, but it is definitely time-expensive [2]
- It is very often difficult for organisations to innovate

Strategic partnerships: Mechanism to ensure medical device innovation

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Uni-Industry Partnerships

- Universities can be excellent partners to the medical industry to enable continuous innovation
- Companies are absolutely vital to universities to enable R&D activities
- Big drive for knowledge economies – enabling environment for these partnerships
- Uni-Industry ecosystems are very much driving medical device innovation in the world – critical mass of researchers, business, inventions, skills, finances, etc.

Universities-Industry Partnerships

- Industry ARE excellent partners to universities:
  - Identify problems to feed into R&D pipelines
  - Landing spot for graduates and researchers
  - Access to industry sites/infrastructure/assets
  - Nuanced operational knowledge of market
  - Industry networks
  - Knowledge of supply chains
  - Potential source of funding
  - Awareness of market needs
  - More?

Universities-Industry Partnerships

- Universities could be excellent partners to industry:
  - R&D on variety of business problems
  - Source of talent and skills
  - Access to specialised expertise
  - Specialised clinical infrastructure
  - Global networks of experts
  - Knowledge of supply chains
  - Access to specialised funding instruments
  - Awareness of industry advancements
  - Technology transfer professionals to support process
  - More?

Enabling Instruments

Enabling Instruments

- Innovation or translational funding as critical enabler of innovation
- Funding easier to unlock via these partnerships
- Uni provides resources to access and manage such funding
- Typical funding opportunities through uni-industry partnership:
  - Grant funding or non-dilutive
  - Small: < R50K (small projects, short time)
  - Medium: R100k – R1m (medium)
  - Large: >R3m – R25m (multi-year projects)

Enabling Instruments

- Innovation funding typically requires:
  - Feasible market opportunity
  - Strong innovation and commercialisation team
  - Realistic project plan or route to market strategy
  - Proper governance of technical development
  - Sound financial management including proper budgeting

- Universities and industry struggle to tick all the above boxes on their own

Funding Instruments at UCT

- UCT PreSeed, Seed and Evergreen Fund
- DTI THRIP & SPII
- MRC SHIP
- DST TIA TDF and SF
- International grants: NIH, B&MG, Wellcome
- EU partnerships: Horizon2020 Program
- UK partnerships: InnovateUK and others
- AU opportunities
- BRICS opportunities
- More…

Challenges

Challenges or Inhibitors Faced

- Mismatch in time-lines
- Lack of appreciation for tasks in the different environments
- Management of the intellectual property created
- Sufficient funding

Case Studies

Conclusion

Conclusion

- Difficult and changing global market – requires innovation
- Innovation is difficult and potentially expensive
- Need partners to navigate these troubled waters
- Funding opportunities as enabler of innovation and partnerships
- Both parties bring value to the table

THANK YOU!

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- Research Contracts and Innovation (http://www.rci.uct.ac.za/)
- University of Cape Town
- Cape Town, South Africa

References

[1] 2018 Global health care outlook: The evolution of smart health care. Deloitte

[2] https://medium.com/@prescouter/innovation-is-expensive-and-other-myths-58ba510a25c0. 26 May 2019.