

HIGH-LEVEL
OUTCOMES
EXPECTED OF
THE BIP
PROGRAMME

- Improved infrastructure planning, design, construction and management tools and decision-making
- Innovative engineering technologies and solutions that improve the resilience and affordability of our built environment
- Smarter, stronger and more productive building and construction industry



Leader, QC

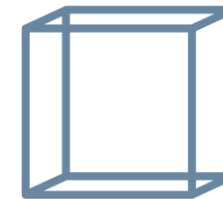
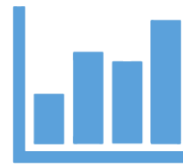
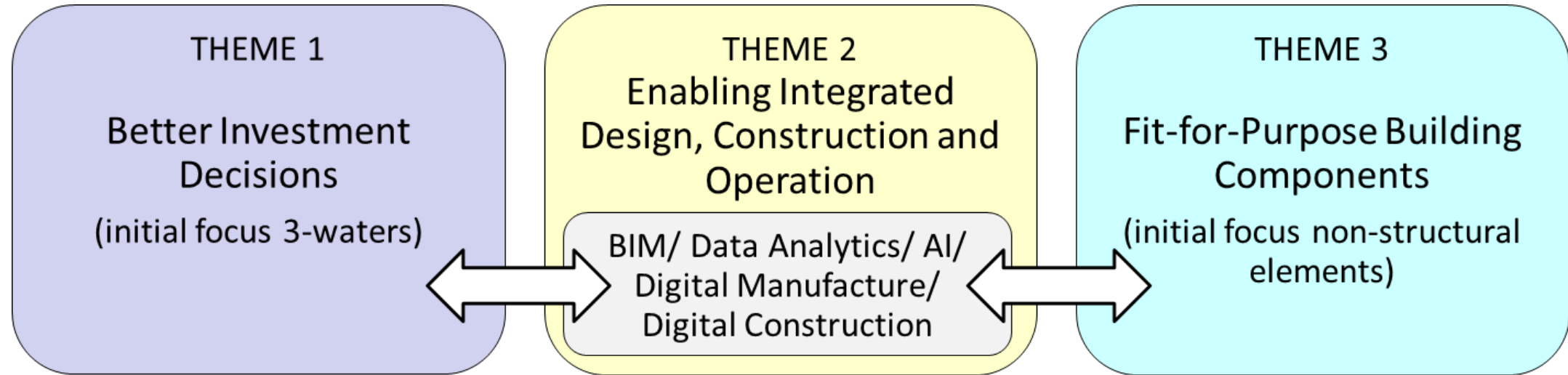


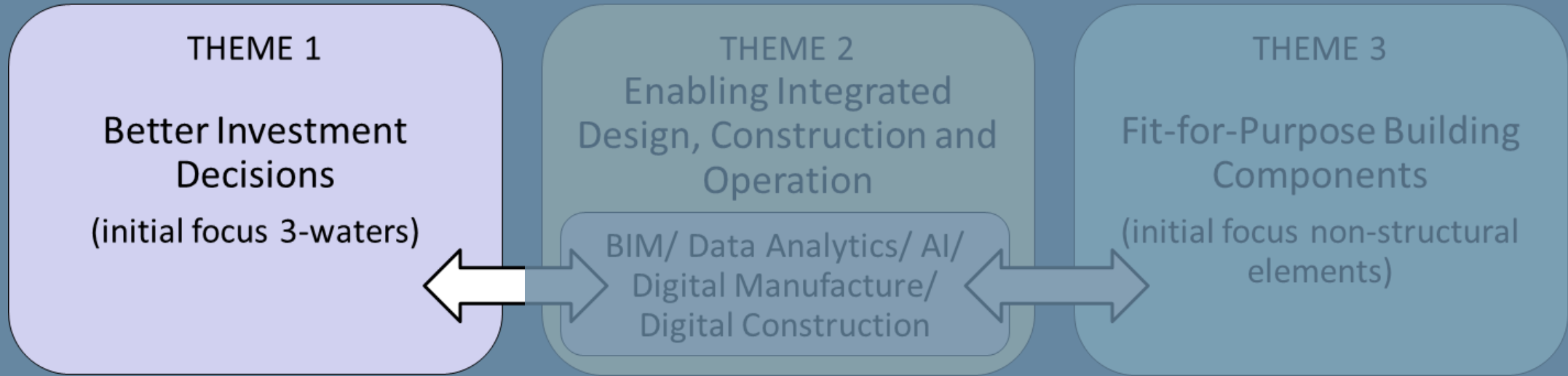
Research Director,
UC



Manager, QC

BIP IS DELIVERED THROUGH THREE INTERLINKED THEMES





Improved infrastructure planning and investment tools and decision-making



Theme Leader:
Theuns Henning,
UA

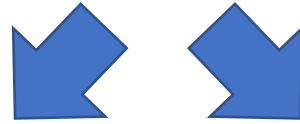


Industry champion:
John Mackie,
Golder

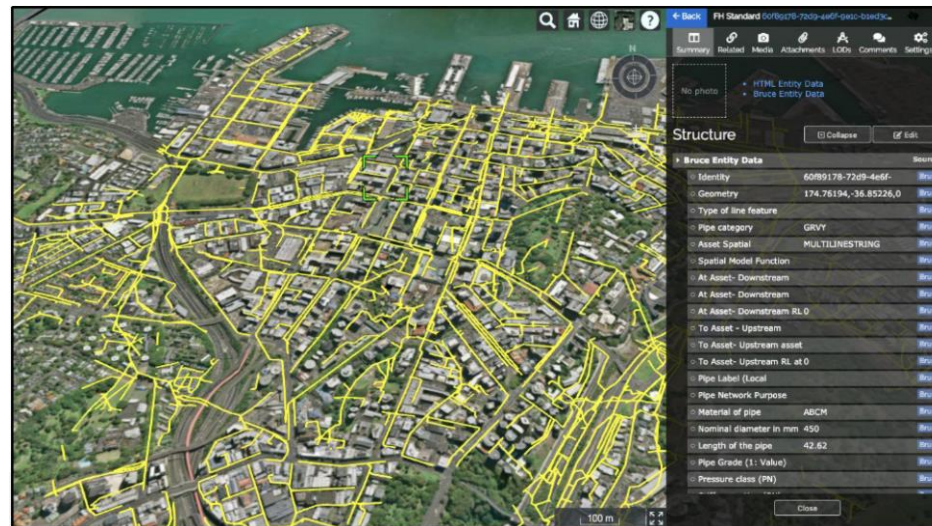
THEME 1 CHALLENGES



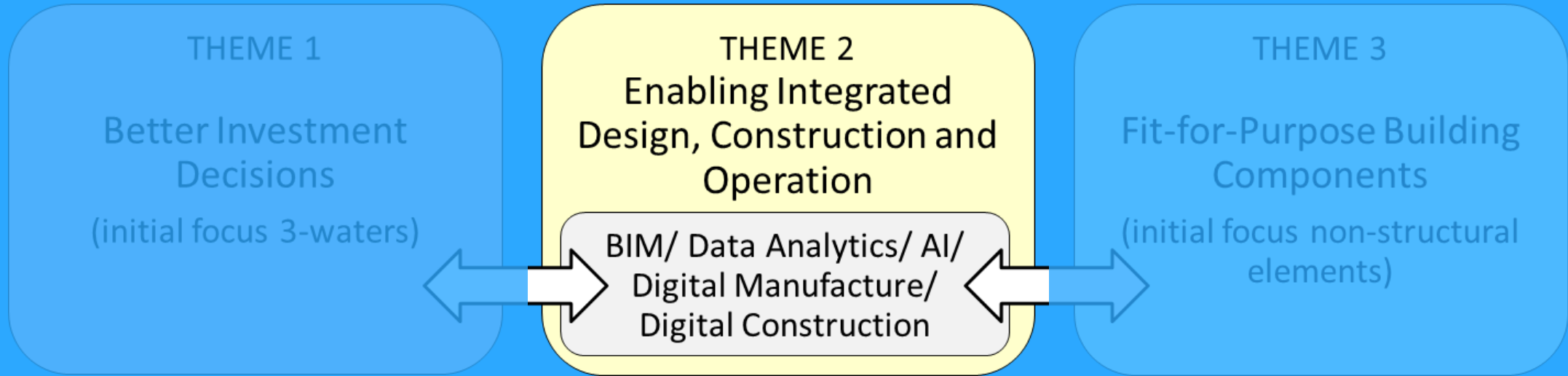
ALLOCATION OF LIMITED FINANCIAL RESOURCES



better able to quantify and 'sell'
benefits of infrastructure



better able to 'tap' data and
analyse performance
(digital twins)



Exploit digital technologies to improve design and construction efficiencies



Theme Leader:
Robert Amor, UA



Industry champion:
Ben Broad, Trimble

THEME 2 CHALLENGES

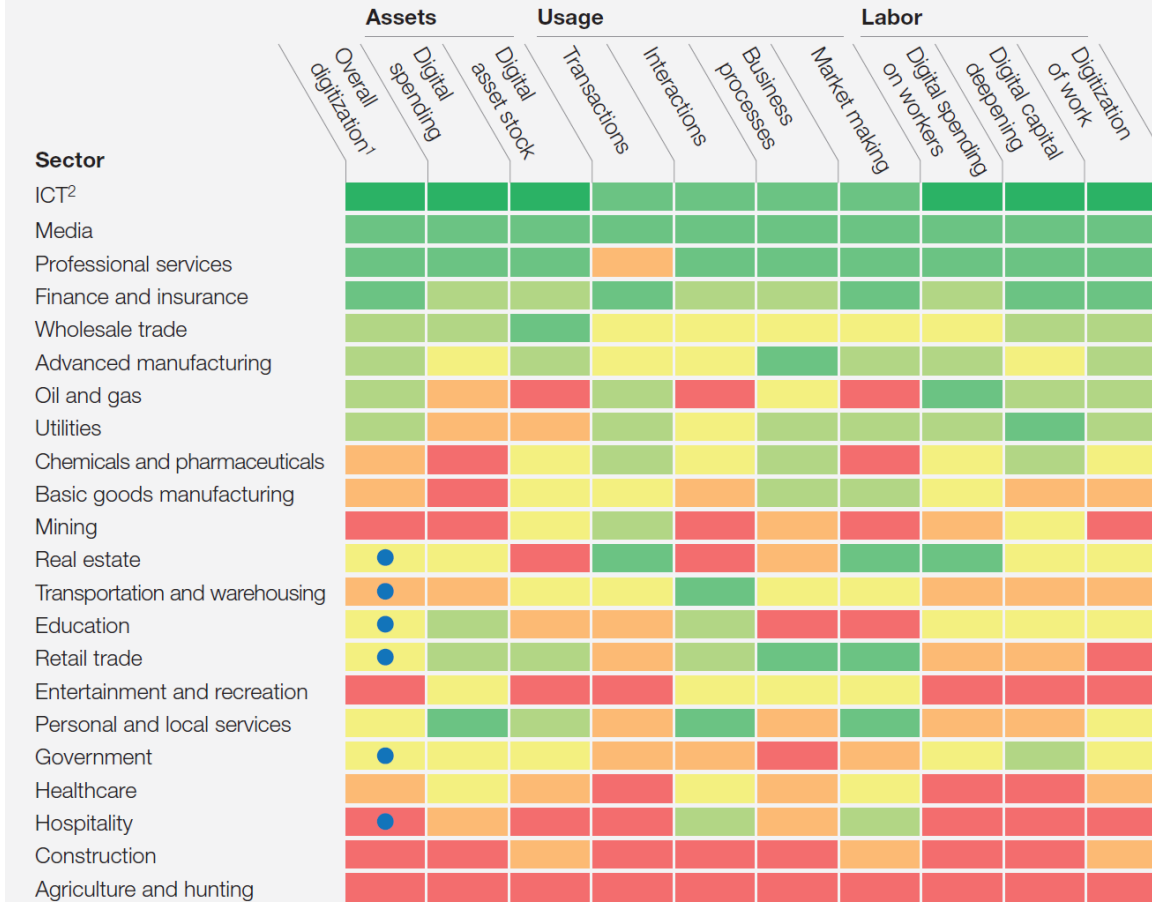


The construction industry is among the least digitized.

McKinsey Global Institute industry digitization index;
2015 or latest available data

Relatively low digitization Relatively high digitization

Digital leaders within relatively undigitized sectors



¹Based on a set of metrics to assess digitization of assets (8 metrics), usage (11 metrics), and labor (8 metrics).

²Information and communications technology.

Source: AppBrain; Bluewolf; Computer Economics; eMarketer; Gartner; IDC Research; LiveChat; US Bureau of Economic Analysis; US Bureau of Labor Statistics; US Census Bureau; McKinsey Global Institute analysis

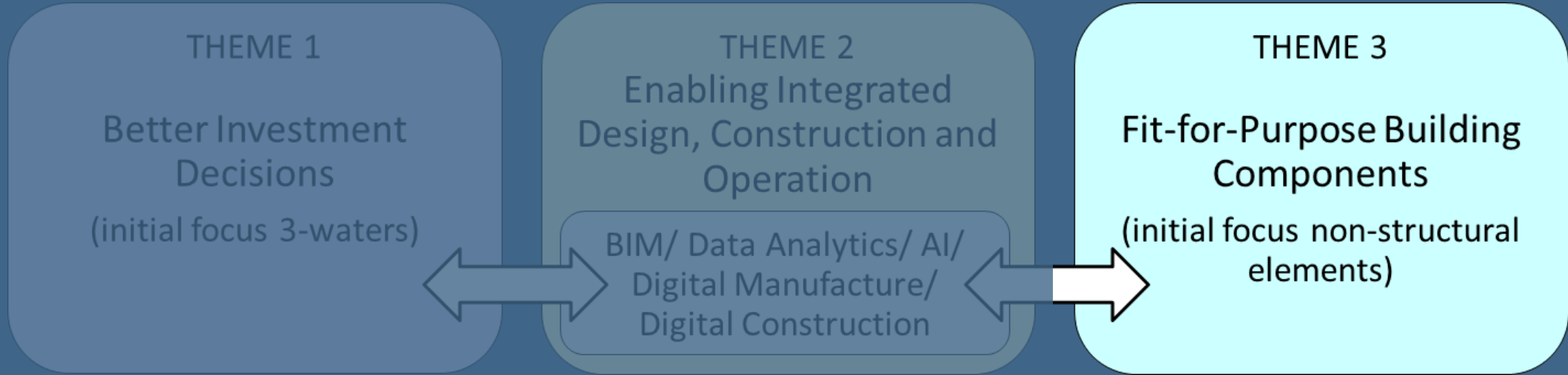
demonstrate value of digital methods/technologies

THEME 2 CHALLENGES



use digital methods/technologies to automate selected processes

use digital methods/technologies to reduce mistakes, improve on-site coordination and help manage risk and responsibilities



Improved resilience and affordability of buildings

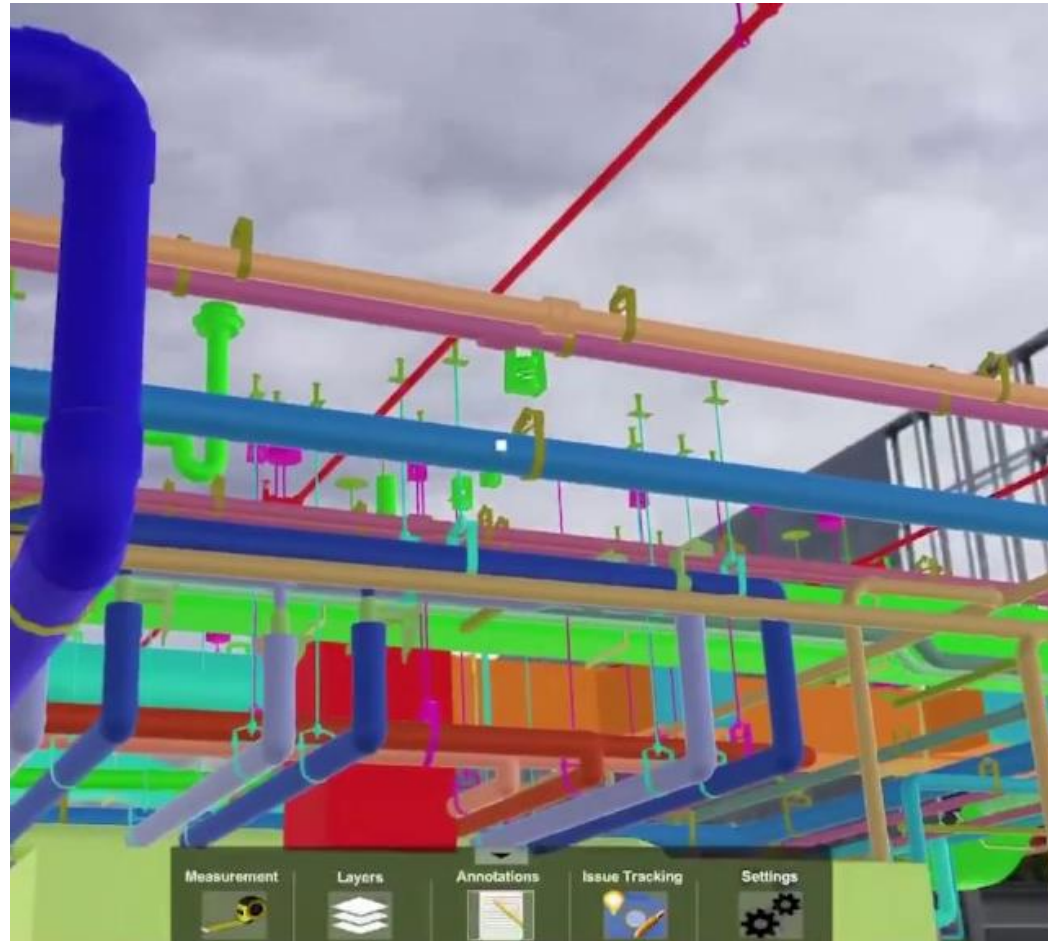


Theme Leaders:
Rajesh Dhakal and Tim Sullivan



Industry Champion:
Jan Stanway, WSP

THEME 3 CHALLENGES



improve design, construction coordination and quality assurance of non-structural elements (address system failure)