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

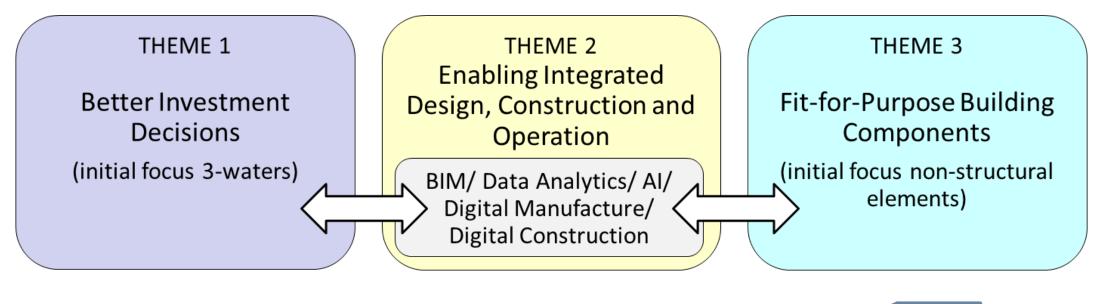


Research Director, UC

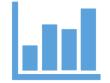


Manager, QC

BIP IS DELIVERED THROUGH THREE INTERLINKED THEMES

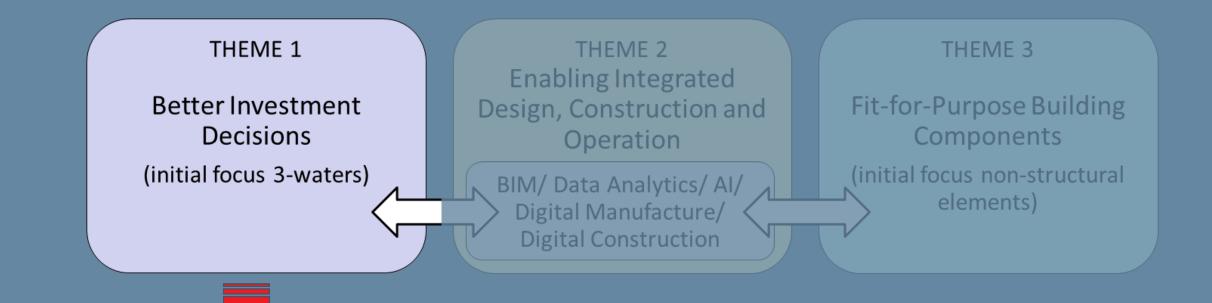








BUILDING INNOVATION PARTNERSHIP



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

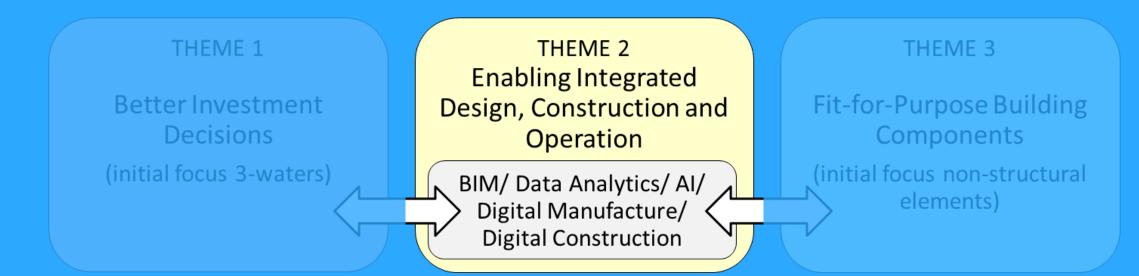




better able to quantify and 'sell' benefits of infrastructure



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

BUILDING INNOVATION PARTNERSHIP The construction industry is among the least digitized.

McKinsey Global Institute industry digitization index; Relatively low digitization digitization digitization digitization

Digital leaders within relatively undigitized sectors

	Assets	Usage Labo		
Sector	Spending Spending	Transactions Transactions	Market making processes	Digitization of work deepending deepending
Sector	7.	v ₹		is ding a far
ICT ²				
Media				
Professional services				
Finance and insurance				
Wholesale trade				
Advanced manufacturing				
Oil and gas				
Utilities				
Chemicals and pharmaceuticals				
Basic goods manufacturing				
Mining				
Real estate				
Transportation and warehousing				
Education				
Retail trade				
Entertainment and recreation				
Personal and local services				
Government				
Healthcare				
Hospitality				
Construction				
Agriculture and hunting				

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

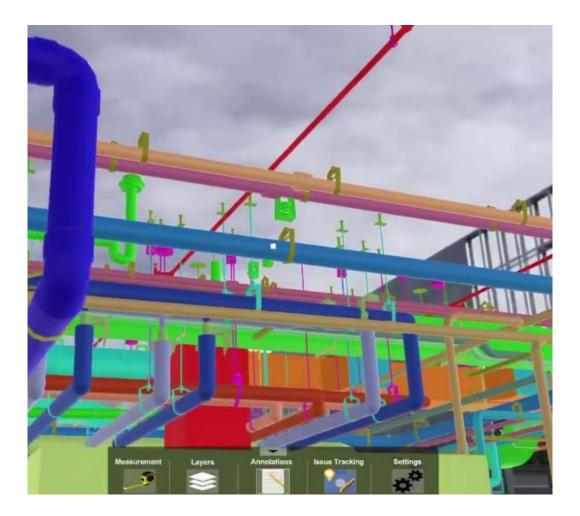


Industry Champion: Jan Stanway, WSP



THEME 3 CHALLENGES





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