Background

However, the Property Sector is lagging behind other sectors in it's drive to digitalisation

Need to improve our processes

Data = **Information** (the "I" in BIM)

Many Challenges e.g. ESG

Built Environment/ Property Sector

By data-driven Decisions
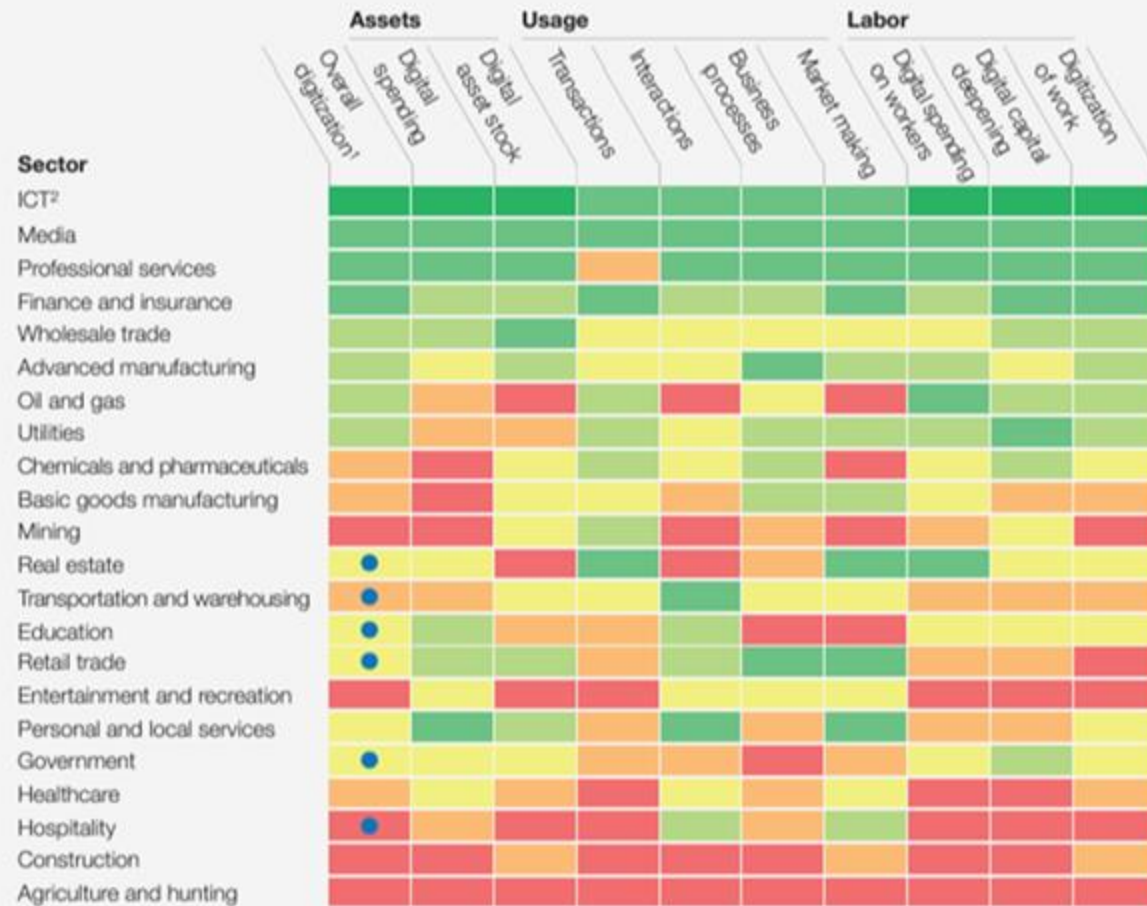
BIM IS THE WAY!

But … Digitisation is needed
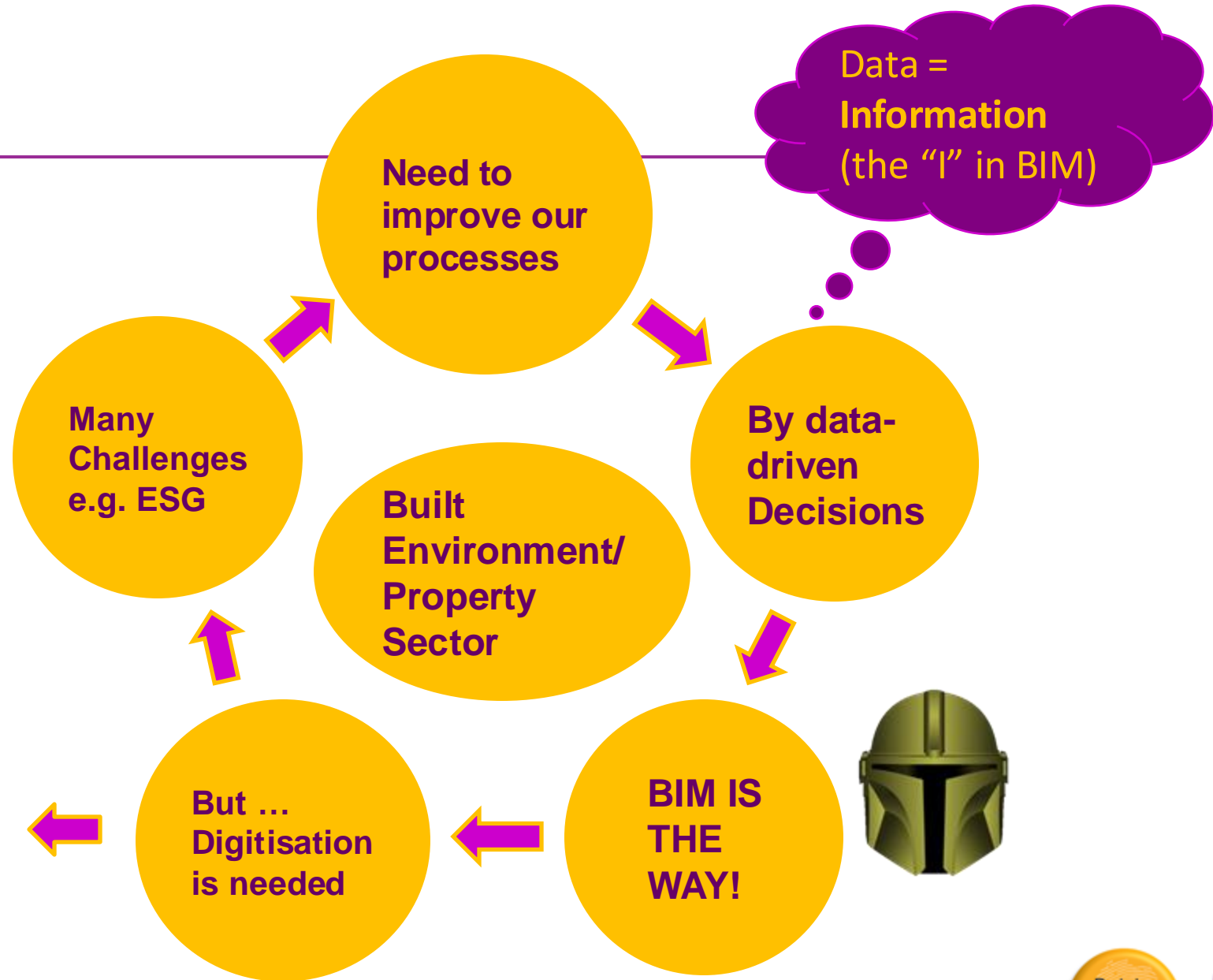
The construction industry is among the least digitized.

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

Relatively low digitization — Relatively high digitization

● Digital leaders within relatively undigitized sectors

Assets: Overall digitization[1], Digital spending, Digital asset stock
Usage: Transactions, Interactions, Business processes, Market making
Labor: Digital spending on workers, Digital capital deepening, Digitization of work

Sector: 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

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

Built Environment/Property Sector organisations are **comparatively very slow to digitalise**.

This impacts effectiveness of BIM.

Figure 2: Construction sector is lagging in it's digitalisation drive (Agarwa *et. al.,* (2016:3))

Digital Transformation in the Property Sector

We conducted a study (2022-23) to determine:

- **Why is the Property Sector so "slow" to digitalise?**
- **What delays the decision-making process in our organisations?**

Organisational structure and **culture** contribute to either expedite or delay the digitisation decision-making process in our organisations.

- Recent global research confirms *"the lack of access to effective data and analytics"* as a primary barrier confronting property industry organisations (JLL Global Research, 2022:26), highlighting the urgency of addressing these challenges.

- McKinsey Global Institute Industry Digitisation Index: Despite significant digital technology advancements, the property and construction industry has been slow to embrace digitalisation, lagging behind other sectors (Agarwa *et al.*, 2016).

Organisational Structures

- Traditional hierarchical & centralized organisational structures: **formal chains of command + top-down decision-making.**

- Modern decentralised structures, *e.g. matrix or holacracy models* are flatter structures: **decisions made in groups** where empowered employees participate in decision making
(Safont, 2020; Indeed, 2022).

- Teal model is more **decentralized:** humanistic and organisational democracy culture - empowering employees to achieve self-actualisation and meaningful work.
(Lee & Edmondson, 2017; Laloux, 2014).

Decision-making follows a **bottom-up approach,** emphasising consensus among employees in teams.
(Safont, 2020).

3 https://www.freepik.com/free-ai-image/3d-rendering-triangle-watee_78132618.htm#from_view=detail_alsolike

4 https://www.freepik.com/free-photo/geometric-abstract-phone-wallpaper-technology-concept-connecting-dots-design_21629590.htm#fromView=search&page=3&position=9&uuid=2afebc56-3c5e-43fc-b7ea-727e30d45226

5 https://www.freepik.com/free-vector/flowing-glossy-spheres-realistic-background_5617346.htm#from_view=detail_alsolike

Organisational Structures: Culture, Cognitive Bariers & Inertia

Theoretical background: Bounded Rationality Theory (Simon,1982) established theory on cognitive frameworks / mindsets.

Mindsets shape organisational culture, including managerial decisions, and influence problem-solving approaches among people.

Mindset opposed to change

Mindset open to change

versus

growth mindset

encumbered by cognitive barriers that overlook emerging possibilities (including innovation, digital transformation & BIM)

agile mindset, learning mindset, the need to explore alternatives (including innovation, digital transformation & BIM)

Successful digital initiatives need a culture with a mindset **open** to change (Volberda *et al*., 2021).
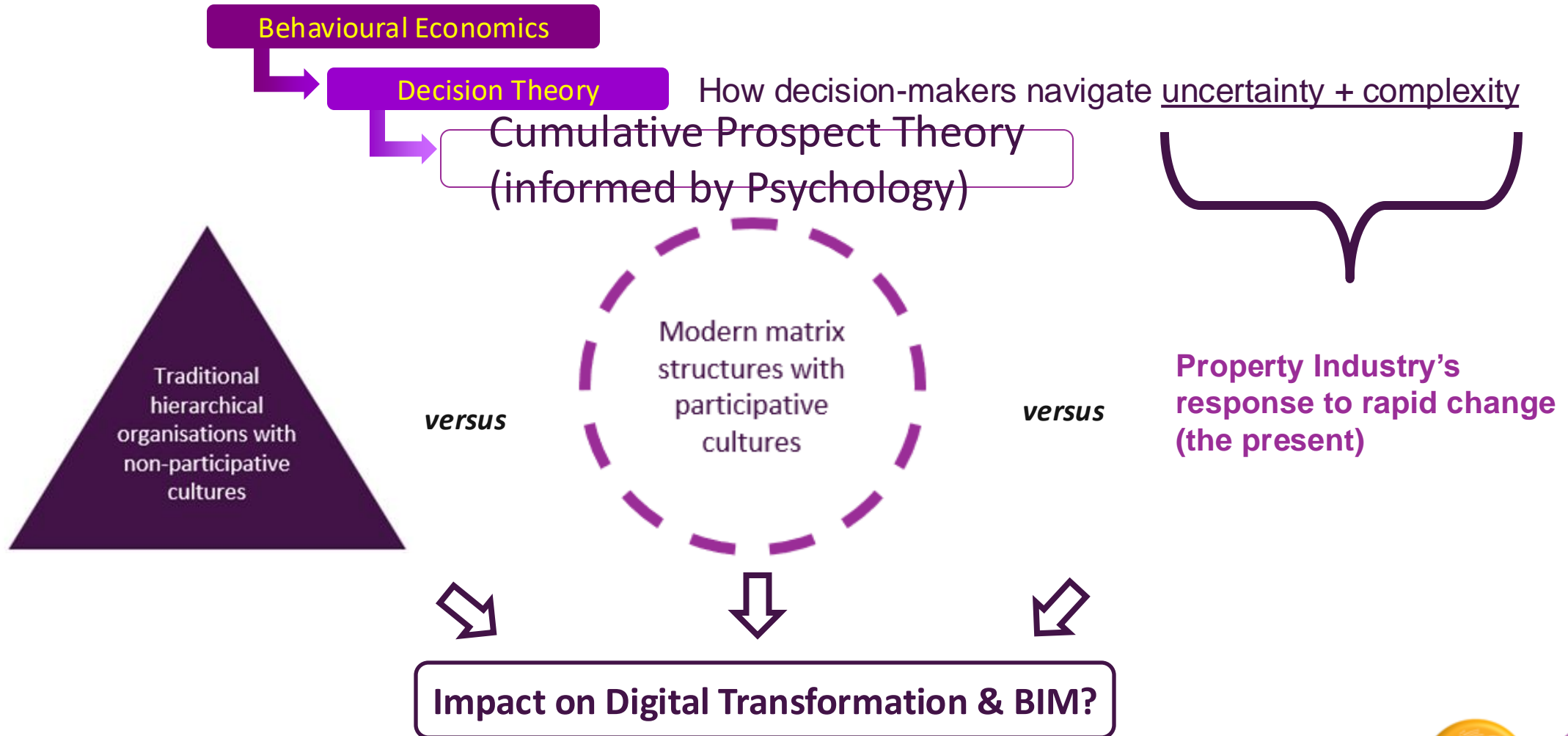
Organisational Structures: Culture, Cognitive Bariers & Inertia

i.e. the present …

- During periods of rapid change, organisational founders or senior executives may struggle to adapt their mindsets.

- Organisational inertia is defined as "the organization's ability to make internal changes in the face of significant external changes.

- When inertia gradually occurs in the organization's actions, **the organization automatically reacts based on past experiences and strongly resists against changing**" (Moradi *et al.,* 2021:172).

Behavioural Economics, Decision Theory and cognitive barriers

Behavioural Economics

Decision Theory How decision-makers navigate <u>uncertainty + complexity</u>

Cumulative Prospect Theory
(informed by Psychology)

Traditional hierarchical organisations with non-participative cultures

versus

Modern matrix structures with participative cultures

versus

Property Industry's response to rapid change (the present)

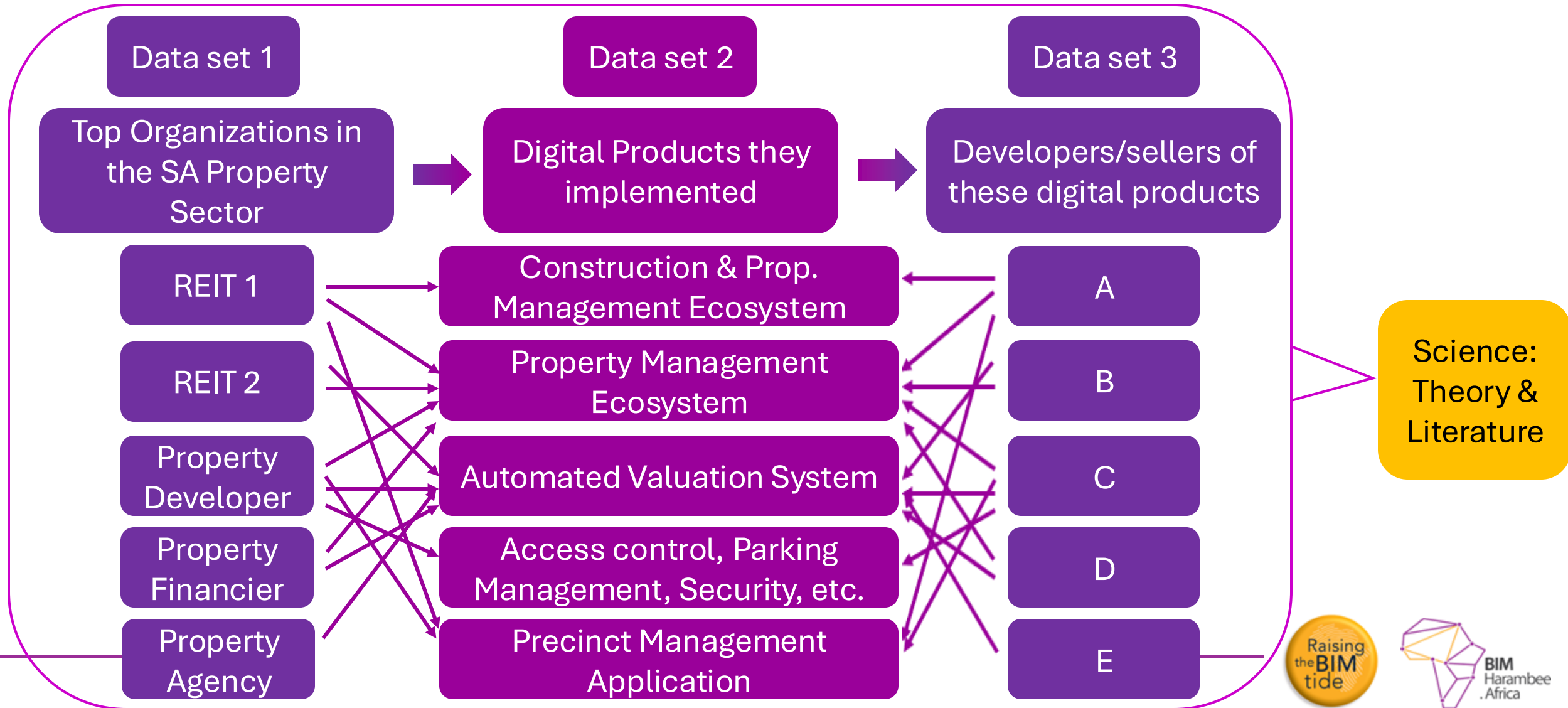**Impact on Digital Transformation & BIM?**

Study conducted in 2022-2023 (Qualitative approach)

See BIM Book 2024 (pp. 16 – 21) for all the scientific details including:

- Theory,
- Literature, and
- Methodology

Three data sets (triangulation and substantiation)

Results:

Traditional hierarchical structures
Declining in SA property sector

Traditional hierarchical organisations with non-participative cultures

Modern / matrix models
Gaining traction, promoting inclusivity and collaboration (inter-departmental team structures)

versus

Modern matrix structures with participative cultures

Structure & culture are intertwined
Organisational size does not dictate culture

1. Contributes to **decision-making delays**
2. **Impedes** data-driven decision-making and implementation of BIM

1. **Expedites** decision-making
2. **Promotes** data-driven decision-making and implementation of BIM

Traditional hierarchical structures

1. **Executives' resistance to change:** Decision-makers often encountered cognitive barriers, clinging to past successes and traditional methods.

- Proposals for digital initiatives (like BIM) are met with disapproval, perpetuating inertia.

2. **Cumbersome processes:** Bureaucratic, multiple layers of approval, committee discussions (loss of momentum + frustration).

- Rigid structures impeded innovation.

3. **Undervalue employee input:** Employees feel disengaged and disillusioned.

- Developed a culture of apathy.

4. **Changes in Senior Management:** Organisational transformation followed after changes in senior management. 🥳

- New leadership prioritised digital initiatives and embraced a more collaborative approach.
- Greater success in implementing digital literacy and digital solutions, especially BIM.

Traditional hierarchical organisations with non-participative cultures

Modern/matrix structures with participative cultures

Modern matrix structures with participative cultures

1. **Expedited the digitalisation process:** Motivated digital literacy, gained access to data (necessary for BIM implementation), and enabled data-driven insights.

•   Decision-makers with a flexible and growth mindset.

2. **Leaders were more adaptable:** Open to change and innovation.

3. **Leaders actively sought input from employees:** Decision-making became a collaborative process, driven by a shared vision and a commitment to embracing new technologies, especially BIM.

4. **Emphasis on employee well-being:** Recognised the value of a motivated and engaged workforce.

5. **Treated employees with respect:** Fostered a sense of ownership and commitment among employees, driving innovation and accelerating the implementation of BIM.

Results confirm the vital role of leadership in organisational culture.

Raising the BIM tide

BIM Harambee .Africa

Conclusion

- Confirmed that traditional **hierarchical structures** with **non-participative cultures** often caused **delays in digitalisation**, especially BIM implementation.

- This **hinders the collection of sufficient data** for data-driven **insights and decisions** in/about property portfolios.

Recommendations

- Transitioning to modern / matrix / holacracy structures with participative cultures will assist to expedite digitalisation, implementing BIM and gaining data-driven insights for decision-making.

Get "Fit for BIM" !

How to get "Fit for BIM": Organisational Transformation

Strategy

- **Cultivate the right mindset:** switch to grow growth mindsets i.e. flexible, open to change and innovation;

- **Produce a Shared Vision:** embrace digital transformation and commitment to new technologies, especially BIM as a process, and as a team.

- **Practice together to become a Resilient Organisation**
  (Puybaraud, 2022, JLL: Resilience in the built environment: Parts 1 & 2).

Structure

To truly become a Digital Organization and BIM-FIT in the Property Sector:

- Evaluate your current organizational + decision-making structures.

- Transform towards a modern/matrix/holacracy structure at all levels.

How to get "Fit for BIM": Organisational Transformation

Culture

- **Become Leaders at all levels** – not Managers at all levels…

- **Practice participative and bottom-up decision-making** in team formats.

- **Emphasize employee well-being** – recognize the value of a motivated and engaged workforce.

Employees, not stuff or technology, are your most valuable investment and asset.

Actively encourage them to share ideas openly, encourage leadership at all levels.

E.g. Pepkor sold 5.6 million cellphones in South Africa in just six months

"The retail group, which owns PEP and Ackermans, sells <u>7 of every 10 </u>prepaid smartphones in South Africa".

-- By Duncan McLeod 28 May 2024

"Indeed, Pepkor is by far the largest retailer of cellphones in South Africa."

TECHCENTRAL   https://techcentral.co.za/pepkor-pep-cellphones-south-africa/245470/

Pepkor's idea of selling cellphones came from <u>two</u> employees.

Foster a sense of ownership and commitment among employees, driving innovation and accelerating the implementation of BIM.

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Fit for BIM?
People + Business
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Thank you!

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