Biodata

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Graduated with Electrical Engineering Degree with Honours from UTM and is currently pursuing a master's in research titled FM's digital transformation at University Malaya.

Zul's professional experience spans diverse industries - working with Hitachi Consultants, Seagate, Apple Inc., Khazanah Nasional and University of Reading.

He has been involved with facilities management, facility setup and strategic facility planning for more than 15 years. He co-founded Infinity Wave to assist organizations with their digital transformation journey.

Since 2019, working on a lot of collaborations project with government and private organizations, on digital transformation and technology adoptions.
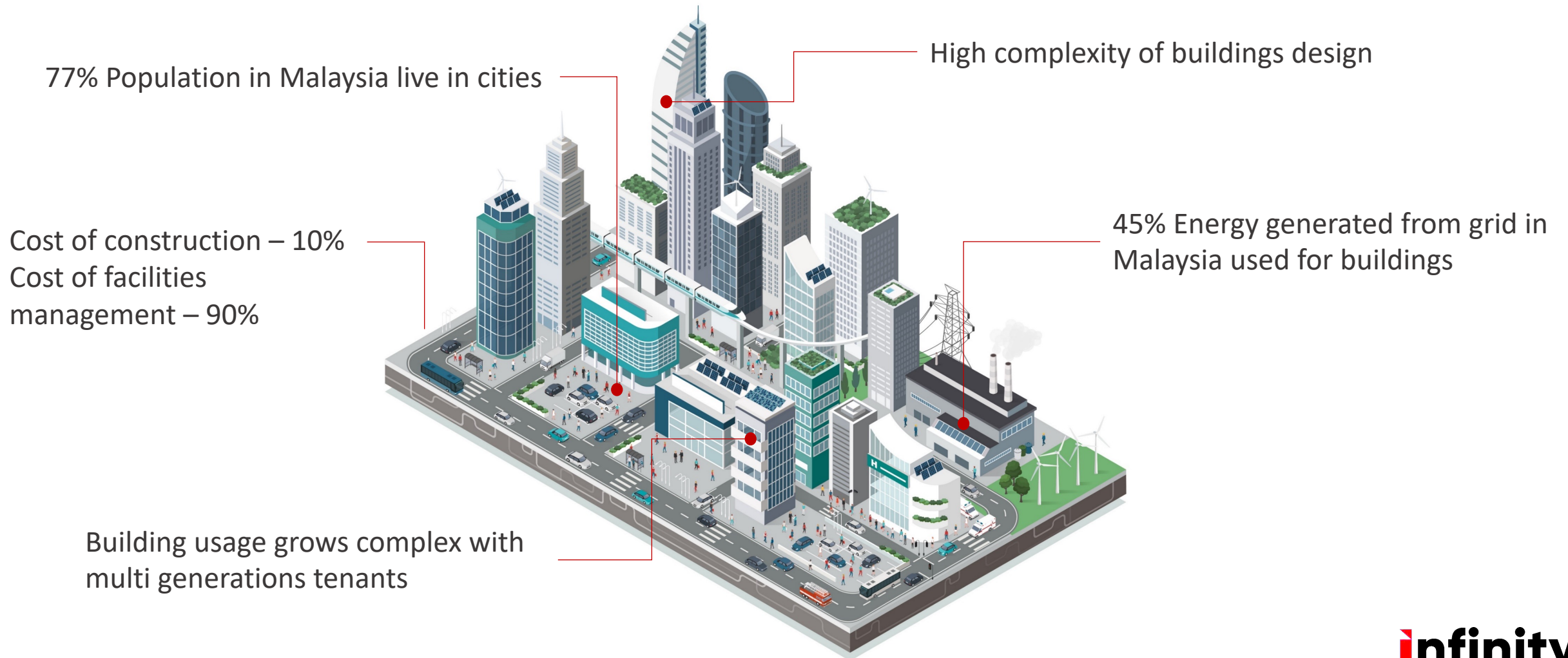
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Current State of Built Environment

77% Population in Malaysia live in cities

High complexity of buildings design

Cost of construction – 10%
Cost of facilities management – 90%

45% Energy generated from grid in Malaysia used for buildings

Building usage grows complex with multi generations tenants
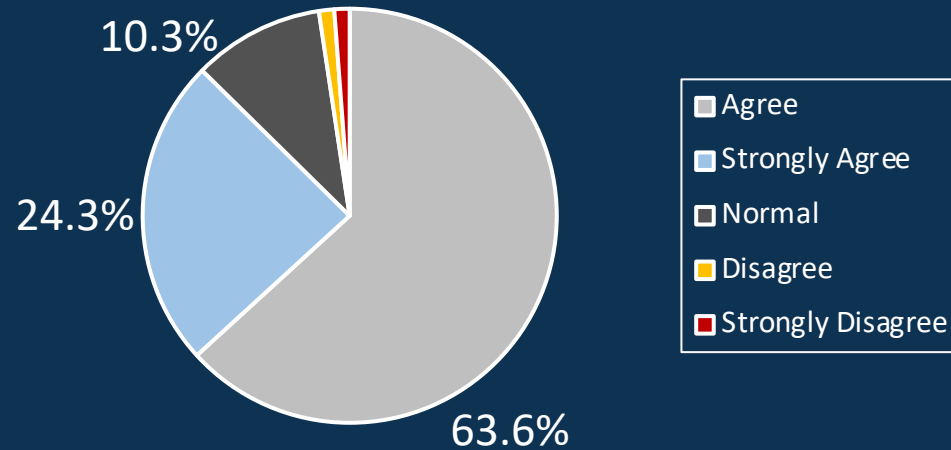
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> The failure to leverage digital technologies to deliver the right information and knowledge at the right time is a significant missed opportunity to improve.

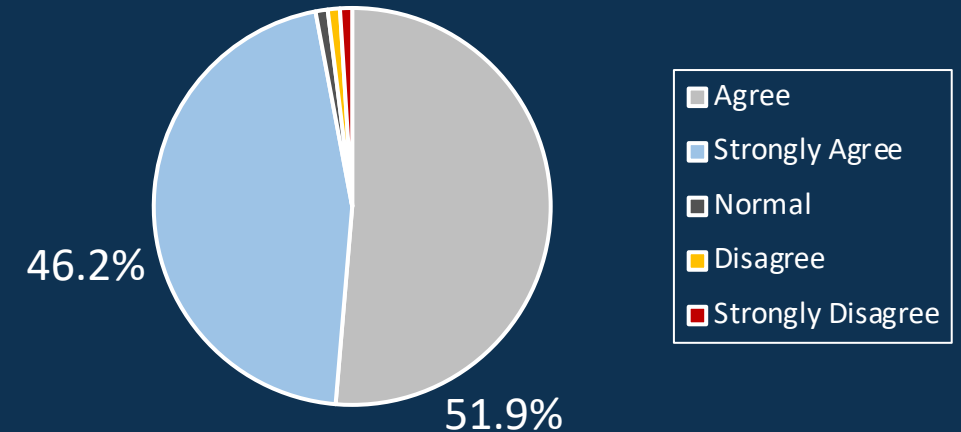The Organisation for Economic Co-operation and Development (OECD)

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Survey on 150 facility managers conducted by Infinity Wave

I voluntary use technology at work

10.3%
24.3%
63.6%

- Agree
- Strongly Agree
- Normal
- Disagree
- Strongly Disagree

I feel technology can help me to do work efficiently and better

46.2%
51.9%

- Agree
- Strongly Agree
- Normal
- Disagree
- Strongly Disagree

Researchers:

Sr Dr Noor Azeyah Khiyon

Zul Azhan Abu Bakar

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Technology Adoption

Technology adoption is acceptance to fully use technology to appropriate context. Technology adoption is important for facilities management, as the first step to integrate new technology and maximize its full value.
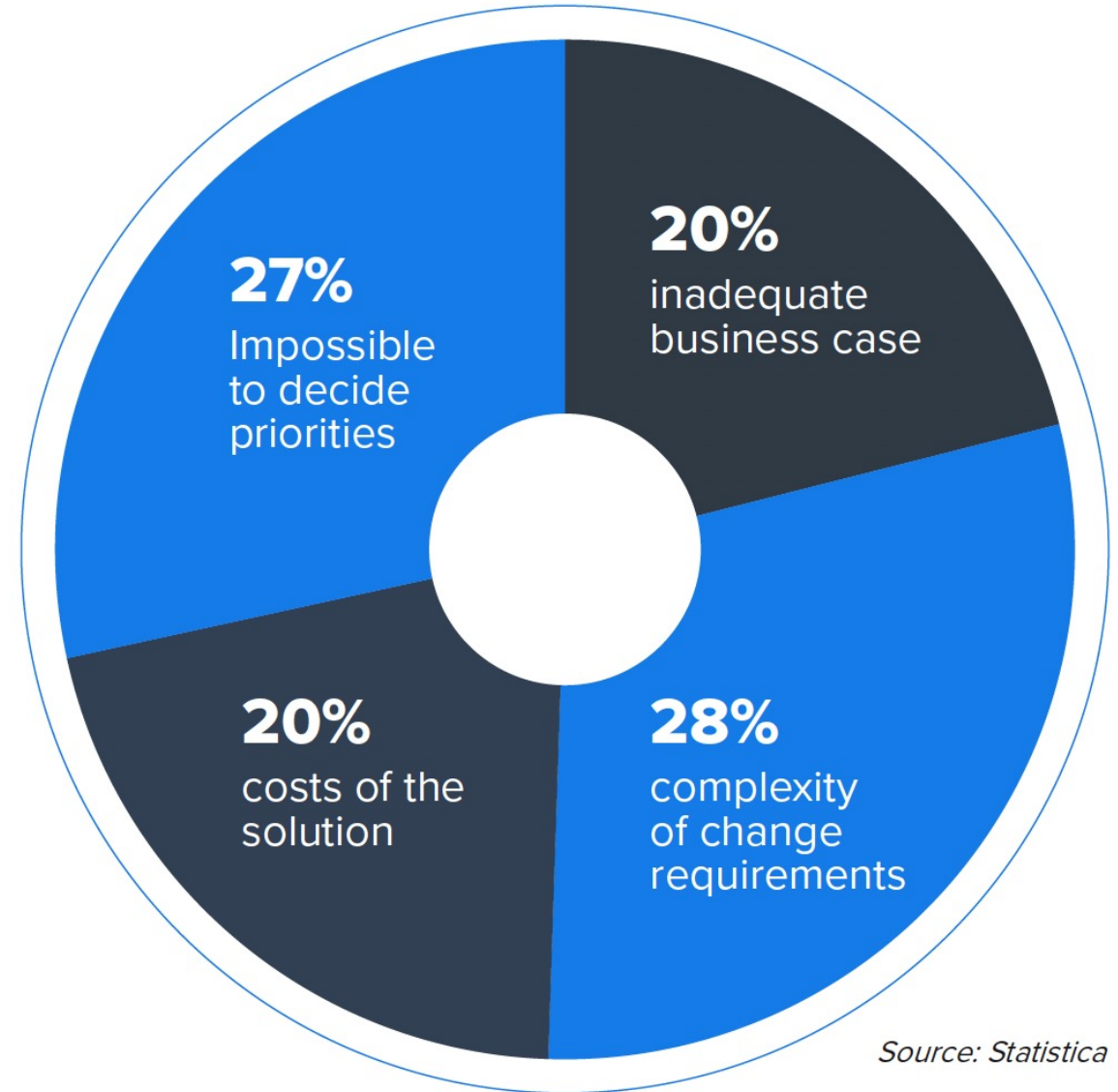
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"80% of technology adoption failed"

Boston Consulting Group

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Barriers for Technology Adoption for FM

- *There are **4 factors** that prevent FM initiatives from gaining approval and inadequate business case is one of them*

- *The more complex the technology is, the higher chances it will not be approved or accepted*

27% Impossible to decide priorities

20% inadequate business case

20% costs of the solution

28% complexity of change requirements

Source: Statistica

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FMs are great at what they do - but FM core competency is not procuring digital technology, particularly when it impacts other business areas.

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So how do we start a meaningful change?

Technology adoptions is not about the tools, but rather about the organizations and the people within them, that must really create the change.

By building consensus that change will be meaningful and beneficial to all. Or, more simply, by building a business case.

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Making a business case is important as it is about

Winning the Battle for Budget

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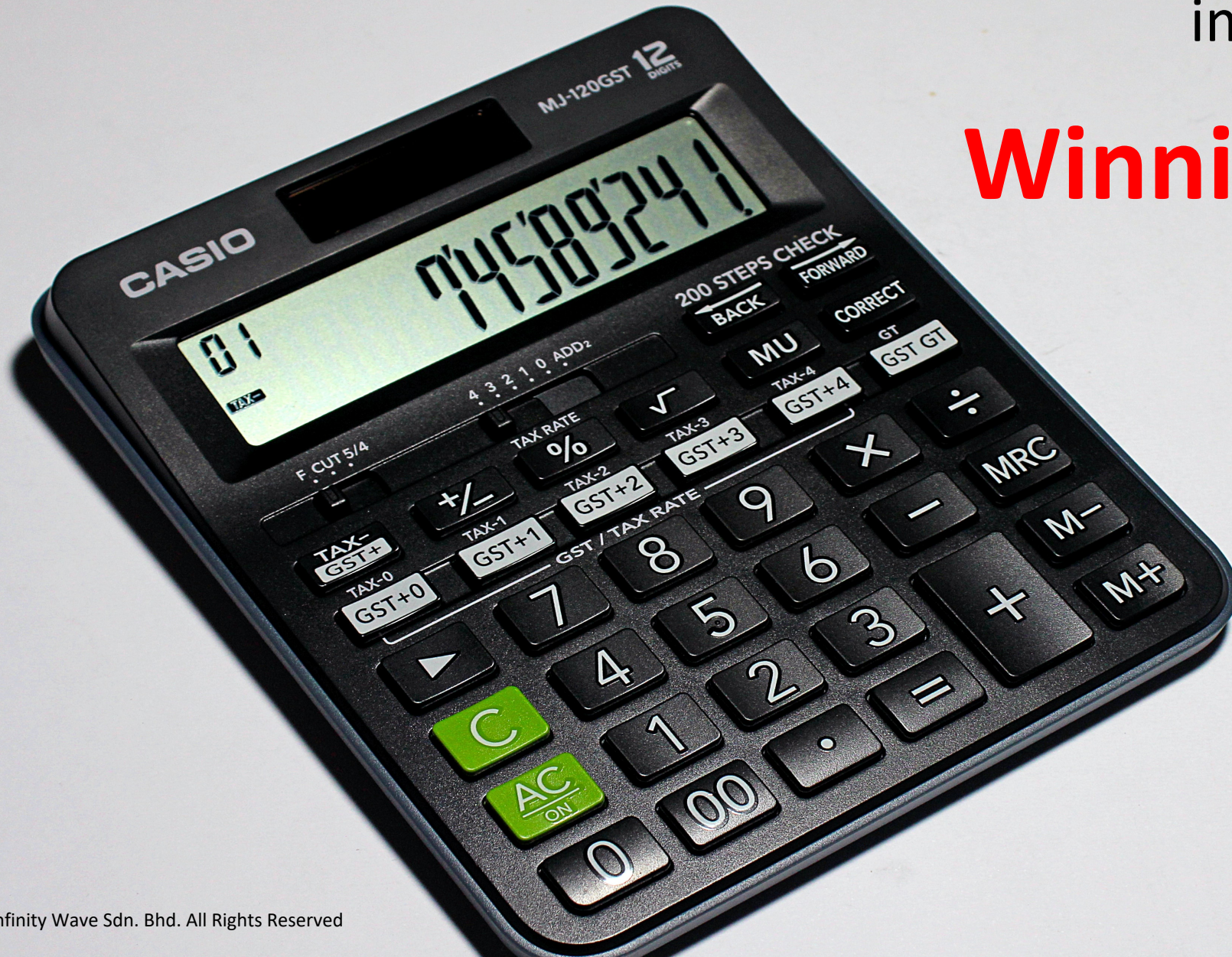
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Steps on Making an Effective Business Case

1	Identifying the key stakeholders
2	Lead with the need
3	Be clear & concise
4	Tell a great story
5	Use industry figures/trends to make your case
6	Use imagery
7	Demonstrate expected savings

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FM needs to identify key stakeholders that will impact the decision making.

Finance

Board of Directors

IT

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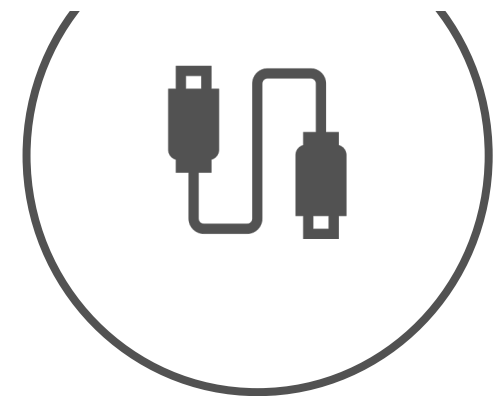innovation is limitless
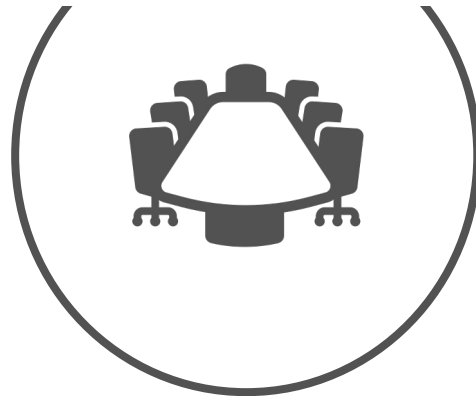
Finance

They will want to see evidence of how it can drive greater value for money from suppliers.

They will also want to know if the system will integrate with their accounting system to improve efficiency and reduce accounting errors.

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Board of Directors

The BODs have financial and strategic objectives at heart. They want to know that teams are operating in the most frictionless and efficient way possible to deliver the best results for the business. But they are also led by the bottom line. Having a strong vision of the profitability of the business and the return on their investment will be key to their procurement decisions. Strategically they need to position their company for growth and protect the company from compliance risk and competitive threat.

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IT
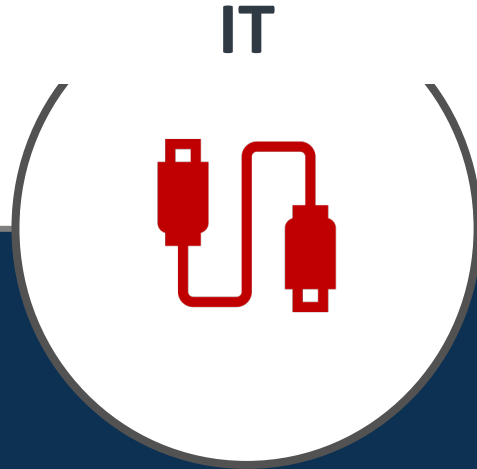
The key gatekeepers for technology procurement. The IT team are responsible for cybersecurity and data protection in your organisation. The rest of the business will depend on them for their professional opinion of the solution on offer. They will want to know whether your supplier has a strong ISMS (information security management strategy), what integrations are supported and that their support SLAs are sound. But they will also want reassurances that implementation and support of the product is not going to drain their budget and be their headache.

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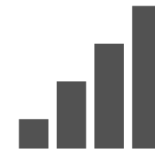# The common objectives of the stakeholders are
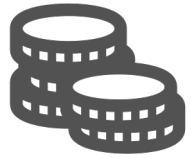
Save Money
The company wants to improve profitability - minimising costs and maximising savings is a common driver for every team

Save Time
The business wants to save time and streamline operations - they want to find greater efficiency and productivity in everything they do

Improve Service
With the use of data, workflow automation and improved collaboration, FM teams and suppliers alike will be able to monitor their SLA performance transparently to ensure the best possible service is upheld

Reduce Risk
The whole business needs to work together to protect data, revenue and reputation. They need to avoid fines and potential legal action stemming from mismanagement - minimising costs and maximising savings is a common driver for every team

Support Strategy
They need tools to support the strategic objectives of the business - the end of silos, digital transformation, the drive for continuous improvement and the key to future business growth

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A Business Case should have

1. Executive summary

2. Business Requirements

3. Proposed Partner & Solution

4. Benefits

5. Risks

6. Savings Analysis
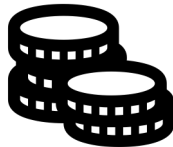
7. Timings

8. Summary

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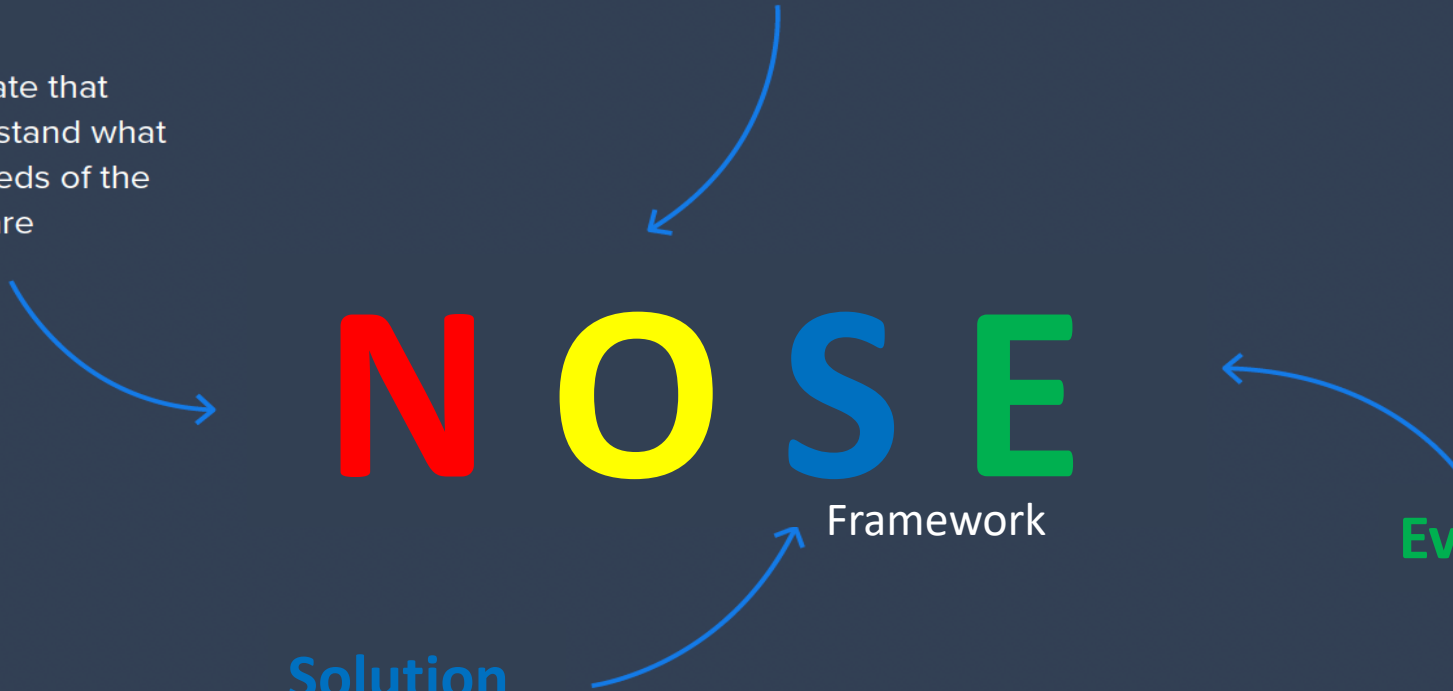
BUILDING A STRONG CASE

"Businesses, on average, spend 80% of their time reacting to maintenance issues that arise rather than preventing them."

By setting up a digital asset register and a full asset management programme we expect to lengthen the lifespan of our assets, improve compliance management, plan Capex requirements and save the business money.

What's the problem	What we need	Why we need it
Building an Asset Register This is often slow or expensive and sometimes both! Collating the information on Excel internally means it's out of date soon after and requires constant revision	☐ Asset data capture forms ☐ Import / export tooling ☐ Multiple creation / cloning of records for efficient data entry ☐ QR / barcode creator ☐ Asset database and maintenance tool ☐ Asset based properties with options for custom fields ☐ Related to appropriate categories and locations	**Save Time / Save Money** • Building an asset register within the CAFM itself will mean it's instantly available for reporting and maintenance. No further time will be required to migrate or import the information into an alternative system.
Assigning work orders to assets Unless we are able to report back to an asset from a work order, we're unable to record data against it	☐ Asset search selection ☐ Mobile asset scanning	**Save Time / Save Money** • Allowing requesters to record work orders against assets saves time . It ensures there is a reporting capability that can support asset lifecycle management
Identifying warranty work Without setting the rules or maintaining an asset register, mistakes can easily be made whereby callouts are made on equipment which is covered by warranty	☐ Asset warranty information ☐ Flagging assets under warranty on work orders ☐ Allowing engineers to record warranty information against assets ☐ Reporting on all work order costs that include assets under warranty	**Save Money** • A CAFM system will allow us to spot work requests on assets covered by warranty and deal with them accordingly. • Equally, if costs are added to work orders that include assets under warranty, we can be alerted to ensure the costs are well audited so we don't pay unnecessarily. • Any work covered by warranty should also be recorded to ensure any recalls can be identified.
Keeping the asset register maintained Unless it's maintained in real-time, we will fail to benefit from making good decisions at the right time.	☐ Mobile-friendly engineer portal ☐ Link work orders to assets ☐ Scan assets to open work orders / create requests ☐ Allow engineer to install, update and dispose of assets in the system	**Save Time** • Allowing contractors and engineers to easily maintain our own asset register when the service is being carried out keeps our database well maintained and up to date. This will support our asset lifecycle management objectives and eliminate the need to maintain it retrospectively ourselves.
Achieving asset lifecycle management We have no idea what we should be repairing or replacing due to a serious lack of data	☐ Business intelligence tool for deep asset data mining ☐ Aggregated asset lifecycle management reporting at site / building / category level ☐ Individual asset analysis that includes depreciation lines, current netbook value, replacement and installation costs ☐ Alerts on work orders when they include assets not fit for repair	**Save Money / Strategic** • Asset management will become more predictive rather than reactive. It will support the business with accurate forecasting to gain optimal asset performance and avoid unnecessary repairs.
Asset based budgeting Budgeting is difficult because we do not know what equipment is expected to fail or deteriorate over the coming 12 months.	☐ Financial planning and forecasting tool for capital expenditure ☐ Budgeting by entire estate, individual sites, category and supplier ☐ Clarity over the quantity of equipment purchases	**Save Time / Strategic** • Accurate and proactive financial planning will allow our business to accurately budget going forward. • It also presents opportunities to negotiate with suppliers over asset purchases e.g. 10 boilers at a better price than buying them individually when required. • We will be able to support smart, strategic capital deployment.

SAVINGS ANALYSIS

HOW MUCH COULD YOUR BUSINESS SAVE?

Technology adoption is not always driven by cost cutting but also by the need to:
- improve performance
- reduce risk and
- other 'soft benefits'

Initiative	Description	Year 1 of initiative	Ongoing - Top end scale saving	Ongoing - Low end scale saving
Resource Time saved by your FM team / helpdesk (ongoing saving achieved within 12 months)	• Less time dealing with inbound and outbound contacts • Allowing the system to send automatic alerts, reminders and chasers • Re-assigning resource to other areas • Improved efficiencies in workflow and work order management • Improved time to analyse performance and other data metrics through reporting	20%	25%	15%
Cost Auditing Percentage of maintenance budget saved (ongoing saving achieved within 18 months)	• Avoid paying a premium for missed SLAs and non-service • Auto-billing of labour utilising engineer time logs and rate cards • Utilisation of artificial intelligence to trigger cost audits based on business rules • Improved monitoring of spend vs budget	3%	8%	3%
Callout Reduction Percentage of maintenance budget saved (ongoing saving achieved within 18 months)	• Duplicate work order detection • Consolidation of work order for planned visits • Improvement of first-time fixes • Spotting trends and recurring problems	2%	3%	2%
Asset Lifecycle Management Longer term saving following asset lifespan (minimum 3 years)	• Recognising work order requests covering assets under warranty • Extending the life of an asset through thorough planned maintenance • Better deploying capital based upon data insights (asset depreciation / net book value) • Improved planning for purchasing new assets / equipment allows for bulk buying and negotiation	-	10%	5%

TIMELINE

How long will the solution take to define, design and configure for your business?

The stakeholders need to know there is a plan for configuration and training within your team as they adopt the new solution. Should you suggest a staggered implementation of functionality to ensure the company sees business benefits and savings from the solution as quickly as possible?

1 **Discovery & Statement of Work**
Outlining business objectives | Ensuring scope alignment
Defining key stakeholders | Setting on timescales | Accountabilities

2 **Data Extraction, Cleansing & Import**
Property, building, locations, spaces & assets| Users, roles & permission
Contractors, services & rate cards | PPM, Compliance templates

3 **System Configuration & Personalisation**
Workflows personalised | Dashboard setup
Reporting setup | Notifications defined

4 **Training & Testing**
In-depth training for each roles | Contractor engagement support
Video & printing guidelines | User acceptance testing

5 **Go-live**
Cut-over to production environment | Communication plan
User access

6 **Optimisation**
User behaviour monitoring | Warranty period for project support
Continuous user feedback | Optimisation based on data & feedback

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"A memorable presentation transforms "numbers on a page" into something more tangible. It becomes a business opportunity that we're grasping, a problem we're resolving, a step forward for the company."

Harvard Business Review

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"COLLABORATION

IS ANOTHER IMPORTANT ASPECT FOR A SUCCESSFUL PROPOSAL"

Open more discussions early on with your teams and stakeholders to understand exactly what they need from a technology implementation and bring them on side.

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