DIGITAL KEYS

Business Case
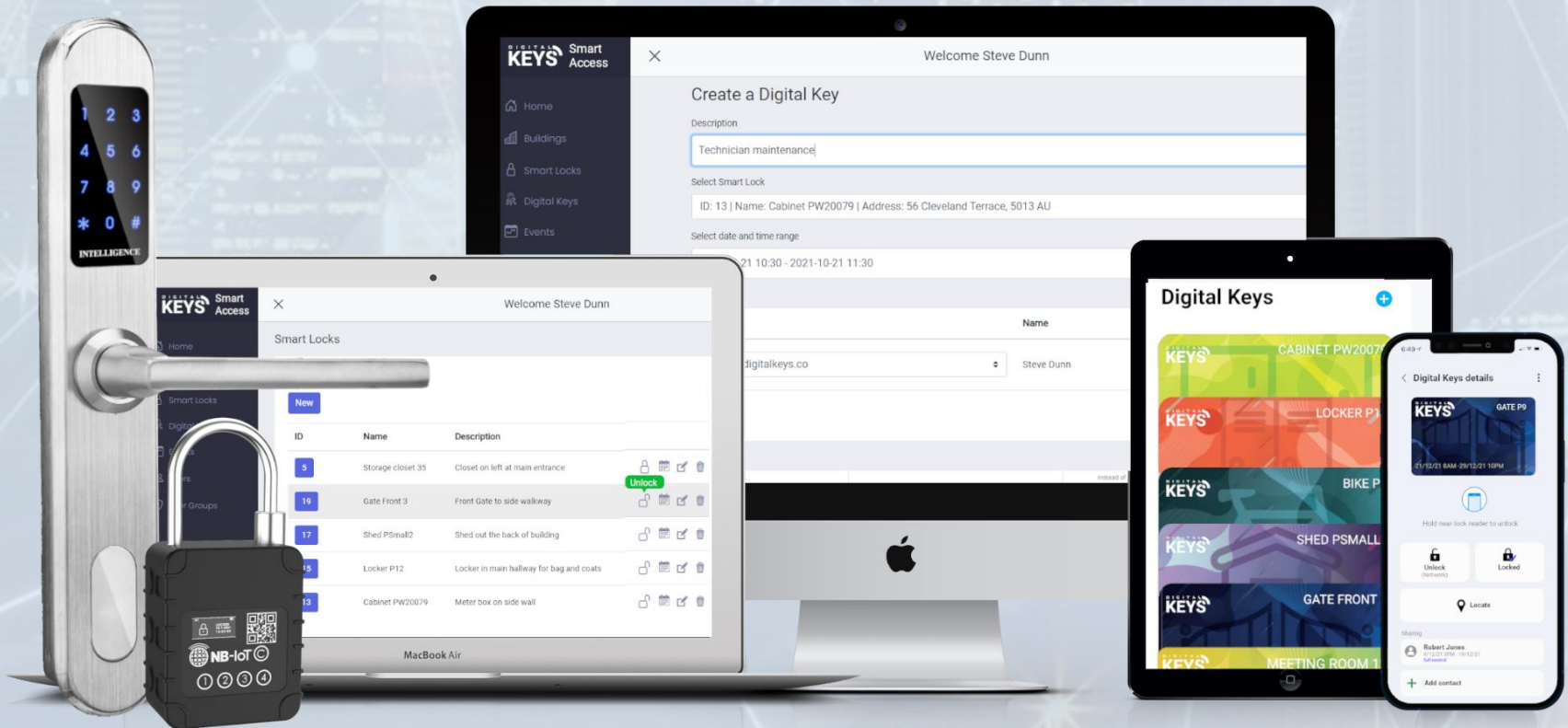
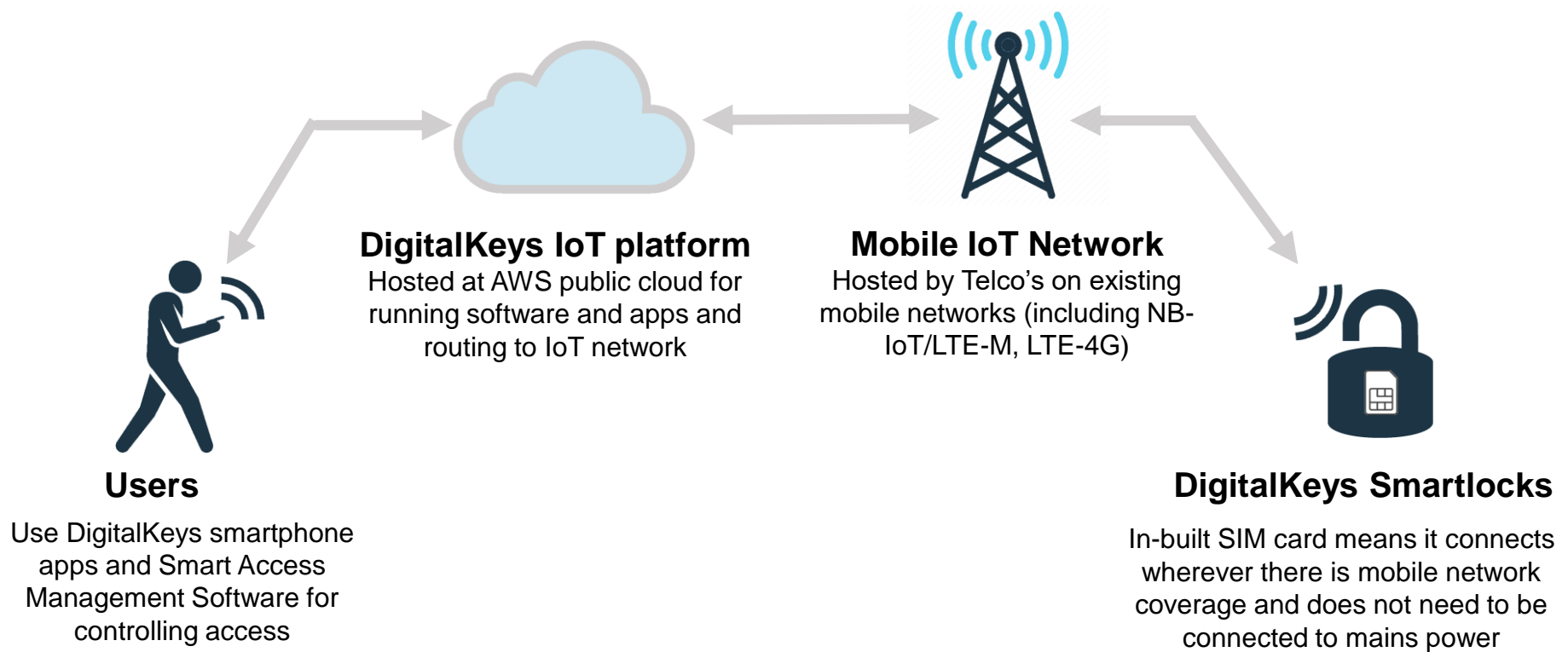Feb 2022

DigitalKeys is a leader in cellular-connected smartlocks and access control solutions

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DigitalKeys sells connected smartlocks and the software/apps that controls them

How it works

DigitalKeys IoT platform
Hosted at AWS public cloud for running software and apps and routing to IoT network

Mobile IoT Network
Hosted by Telco's on existing mobile networks (including NB-IoT/LTE-M, LTE-4G)

Users
Use DigitalKeys smartphone apps and Smart Access Management Software for controlling access

DigitalKeys Smartlocks
In-built SIM card means it connects wherever there is mobile network coverage and does not need to be connected to mains power
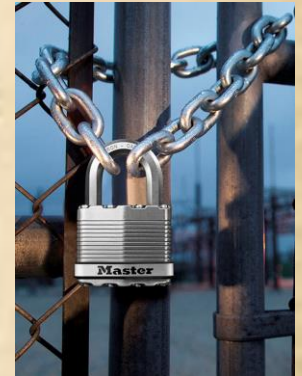
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The Problem

Today we have smartphones, digital banking, everything is smart, yet most of us still use a metal key lock designed from the mid-1800's to secure and control access to our assets and valuables.

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The Problem

1800's locks

2020's locks

Nothing has changed in 200 years

What other choices do companies have now?

Most smartlocks rely on Wi-Fi/Bluetooth (25-year-old tech) but they have many problems including....

Require onsite equipment

Have low battery life

Are insecure and regularly hacked

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Cost Benefit Analysis

A typical site scenario with metal keys for large companies

Site Owner

Managers

Contractors/Engineers/Cleaners

⚠️ **Contractor A** thinks its more efficient to duplicate metal keys to the site to save him time and money. He also cuts a spare copy for his cousin and gives to him to drop materials off.

⚠️ **Contractor B** commonly leaves door unlocked (he doesn't like to drive across town to pick up and return keys daily)

⚠️ **Cleaner** knows where spare keys are kept on some sites, and uses a clay mold to replicate the key and do a 3D print.

Problem - some materials go missing on site. There is no way to determine who is responsible – it could be related to 1 and/or 2 and/or 3 as described above. Nobody knows who is onsite and at what time with metal keys.

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Cost Benefit Analysis

Most companies still rely on metal key locks which are insecure (can be snapped, bumped, cracked open in seconds) and pains…
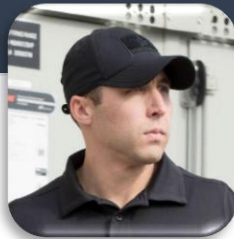
Ground Engineers

"INCONVENIENT AND INSECURE"

- Have to physically meet someone somewhere to get a key which could involve hours of driving
- Someone in team might duplicate or 3D print a key to use illegally

Contractors

"INEFFICIENT AND TIME CONSUMING"

- Access approve process takes too long
- Picking up and returning keys are often done out of office hours or during hours and is time consuming
- Fines (e.g $250) if they lose the key

Mid-Managers

"DOES NOT CAPTURE DATA"

- Don't know if workers actually arrive on work sites
- Paperwork for hundreds of workers regularly requiring access is overwhelming and time consuming
- Don't know if the doors are locked

Executive Managers

"HIGH COSTS AND HIGH RISKS"

- Complaints > losing customer's trust
- Drop in revenue due to lack of safety
- Higher Insurance Premiums
- Lost keys = locksmith callout fee $200
- Low safety practices damages the company reputation

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Cost Benefit Analysis

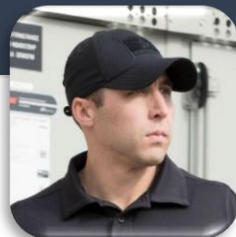**Digital Keys Ltd NB-IoT connected smart padlock solution means...**

Ground Engineers
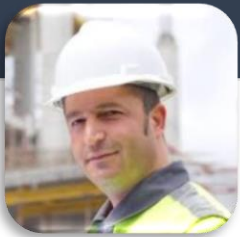
HIGHER EFFICIENCY LOWER RISKS

- Able to dedicate more time to work on site
- Stop using personal time to retrieve keys
- Stop worrying about losing keys/team members losing keys
- Stop worrying about safety onsite knowing that digital keys are controlled.

Contractors

MORE FLEXIBILITY SIMPLER ACCESS

- Can drive straight from home to sites (digital key is emailed to them)
- Easier to locate sites with GPS inbuilt
- Can easily pick up different site work on the go
- No complicated arrangements for meetings to pick up metal keys

Mid-Managers

MEETS OH&S SAVES TIME/MONEY

- Track/trace workers movements with unique digital keys for OH&S
- No more need to manage physical metal keys
- Improved safety
- Approve access requests and schedule accesses on mobile app or web platform in seconds
- Reduce Paperwork

Executive Managers

LOWER COSTS NO COMPLICATIONS

- Never replace a lock or key again
- Requires no supporting network infrastructure
- Gives transparency and accountability
- Check the smart locks status/users status online
- Have daily, weekly, monthly reports
- Stop illegal key duplications and reduce risks

KEYS

Cost Benefit Analysis

Sample- Critical Infrastructure Company maintenance of metal key padlocks

Nationwide Sites
| 10,000 | **A** |

Preventative Maintenance Visits^ p.a
| 2 | **B** |

Corrective Maintenance Visits* p.a
| 4 | **C** |

Travel time + onsite time at each site
| 3 hrs | **D** |

Employee Pay Rate
| $45 hr ($350 a day field rate) | **E** |

Fuel Cost per Km
| $0.49 | **F** |

Travelling Distance per visit
| 40 kilometers | **G** |

Estimated Time saved

B + **C** x **D** x **A** = 180,000 hours

Estimated Staff Savings Costs

180,000 hours x **E** = $8,100,000

Estimated Fuel Saving Costs

B + **C** x **A** x **G** x **F** = $1,176,000

TOTAL SAVINGS p.a

$8,100,000 + $1,176,000 = **$9,276,000**

Cost Benefit Analysis

Maintenance Costs per year for metal key padlocks for 10,000 sites approx.
$9,276,000 ($773,000 per month)

Cost to purchase NB IoT padlocks $169 per unit x 10,000 sites (no maintenance required)
$1,690,000

EXPECT TO SEE R.O.I WITHIN AROUND 2 MONTHS OF IMPLEMENTATION!

NOTE: This ROI considers maintenance only, and not even the day-to-day costs of metal key management. The ROI is considerably less when looking at the time saved in picking up metal keys and dropping them off everyday at head office, and the HR/mid-manager management time saved for managing metal keys.

Compare access control solutions

	NB-IoT	Wi-Fi/BLE	RFID Keycard
Timed Access Control	✅	✅	✅
Internet Connected	✅	✅	❌
No set up costs	✅	❌	❌
No onsite power	✅	❌	❌
No onsite equipment	✅	❌	❌
Long battery life	✅	❌	❌
Many locks 1 account	✅	❌	✅
Mobile Network security	✅	❌	❌

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Competitive landscape
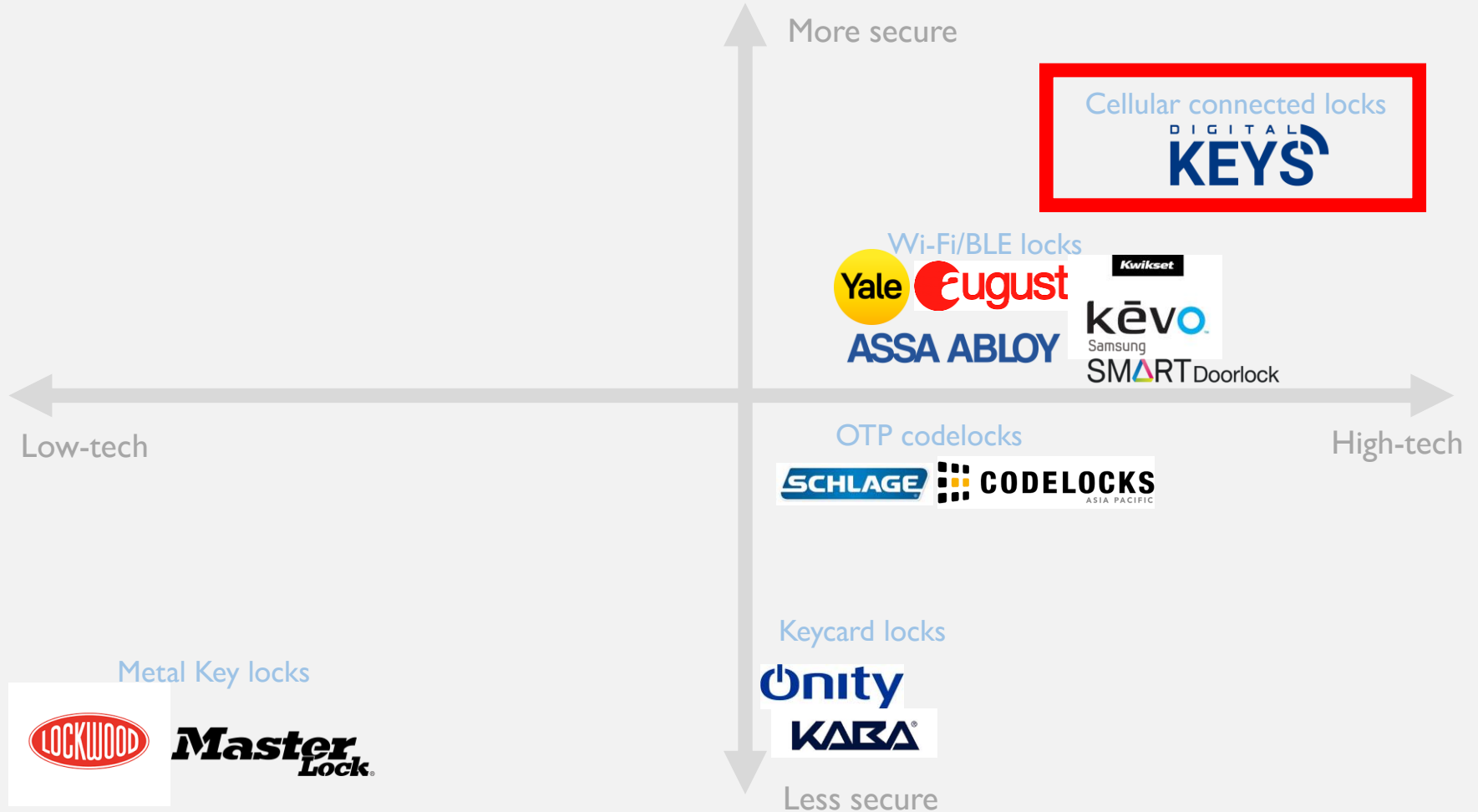
Summary

Digital Keys Ltd NB-IoT smart padlock helps enterprises…

INCREASE UPTIME

IMPROVE SECURITY

DRIVE EFFICIENCY

REDUCE COSTS

MINIMISE THEFT

IMPROVE OH&S

For more information visit https://www.digitalkeys.io/

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