

Webinar Hosted by:

Centre of Supply Chain Management
University of Auckland Business School

The Impact of COVID-19 on NZ Supply Chains and Actions to Take

Mark Singh

16th April 2020



Agenda

- **Part 1**
 - Impacts and Disruptions..to date
 - How to get ready?
 - Supply Chain Response Framework
- **Part 2**
 - Foundational Capability for COVID-19 Response
 - My recent experiences with mitigations

COVID-19: NZ Supply Chain Impacts to date..

Changing customer demand → Inventory and Working Capital

Supply Shortages → Low Inventory

Reduction in freight capacity → Increase in transport cost and lead times

Labour shortages → Capacity Constraints

Nestlé CEO Mark Schneider warns that the business must 'get ready for the storm' as supply chain challenges are expected to intensify amid the global coronavirus pandemic.

...."get ready for the storm"



How to “get ready for the storm”?

Ask 3 key questions and seek answers..

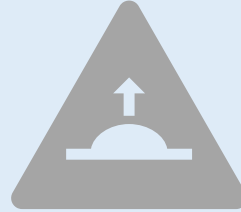


Depth of Disruption

How deep are demand reductions and supply constraints?



**Social Behaviour,
Spending, Travel**



Length of Disruption

How long could the disruption last?



**Credit Defaults; Stock
Markets; Unemployment**



Shape of Recovery

What would be the nature of bounce back?



**Industrial and Trade
Activity**

GENERIC LEAD INDICATORS

COVID-19 Post Lockdown:
Supply Chain Response Framework

**Immediate to
Near Term**

**Short to
Medium
Term**



Alert Levels

COVID-19 Post Lockdown:
Supply Chain Response Framework

Immediate to Near Term

Short to Medium Term

Present Focus

Restore

Response Capacity and Speed

Plan Ahead

Revitalise

Uncover scenarios and strategy

Likely NZ Scenario Post Lockdown: MY VIEW

Virus Response

- Contained by end Q2 (June 2020)
- No Widespread resurgence

Economic Policy

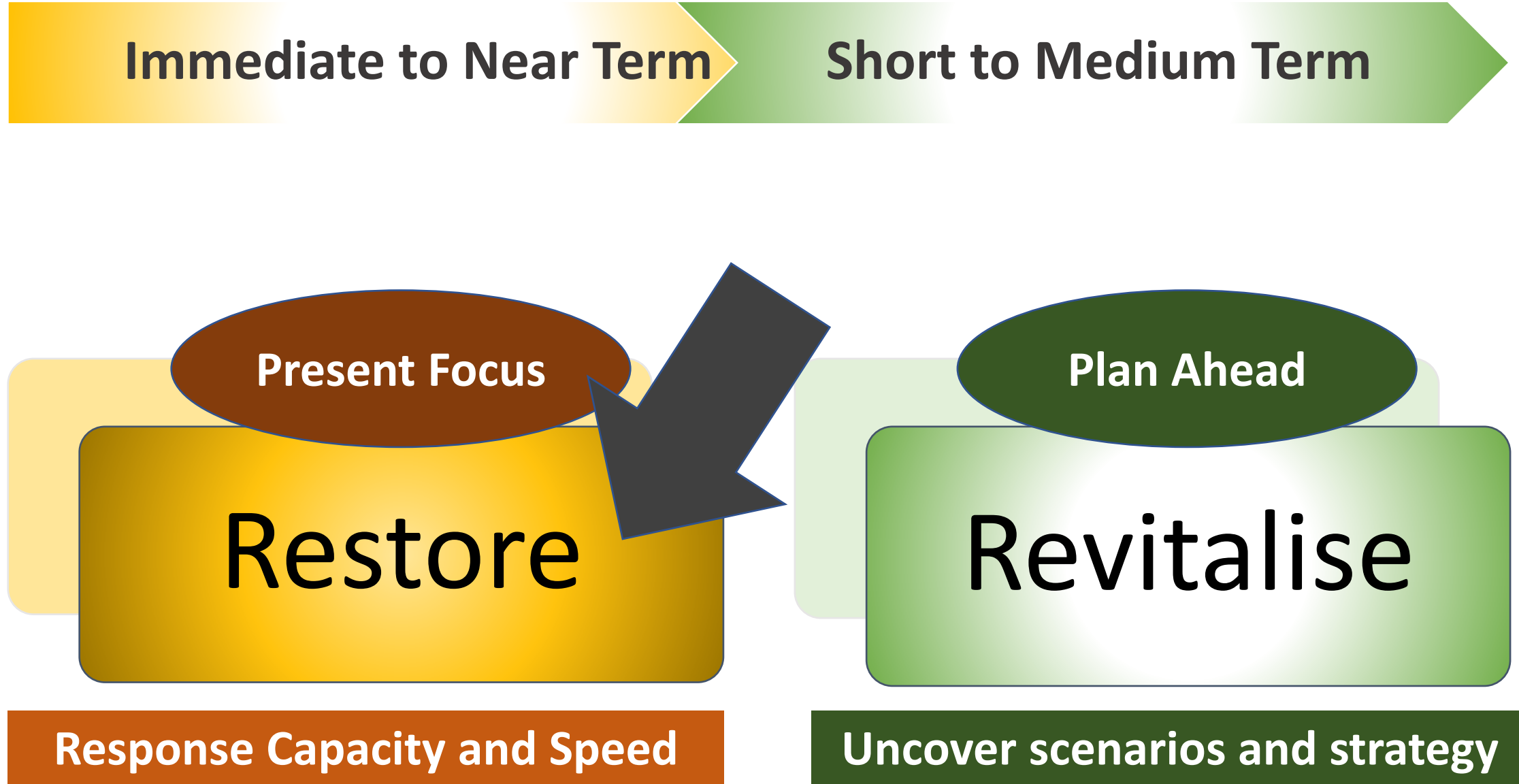
- Partially offsets damage
- Steady bounce back in demand

Global Outlook

- China slowdown sharp but short; Flat 2020
- EU, UK, US – Muted recovery by Q4'20

Proven and Industrialised Vaccine not available for at least 12 months

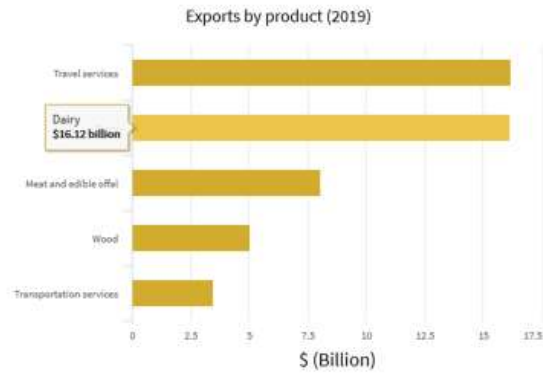
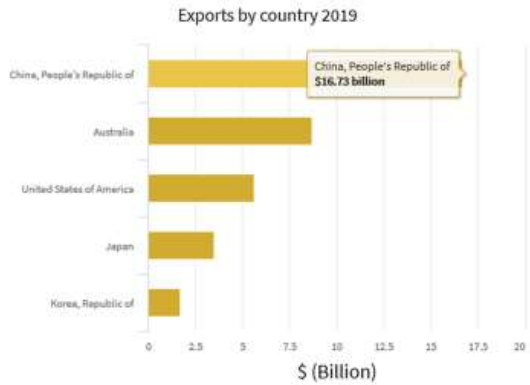
COVID-19 Post Lockdown:
Supply Chain Response Framework



NZ Economy and Supply Chain

Snapshot

Total Exports: \$86 Billion



China
Australia
US
Japan
Korea

~46%

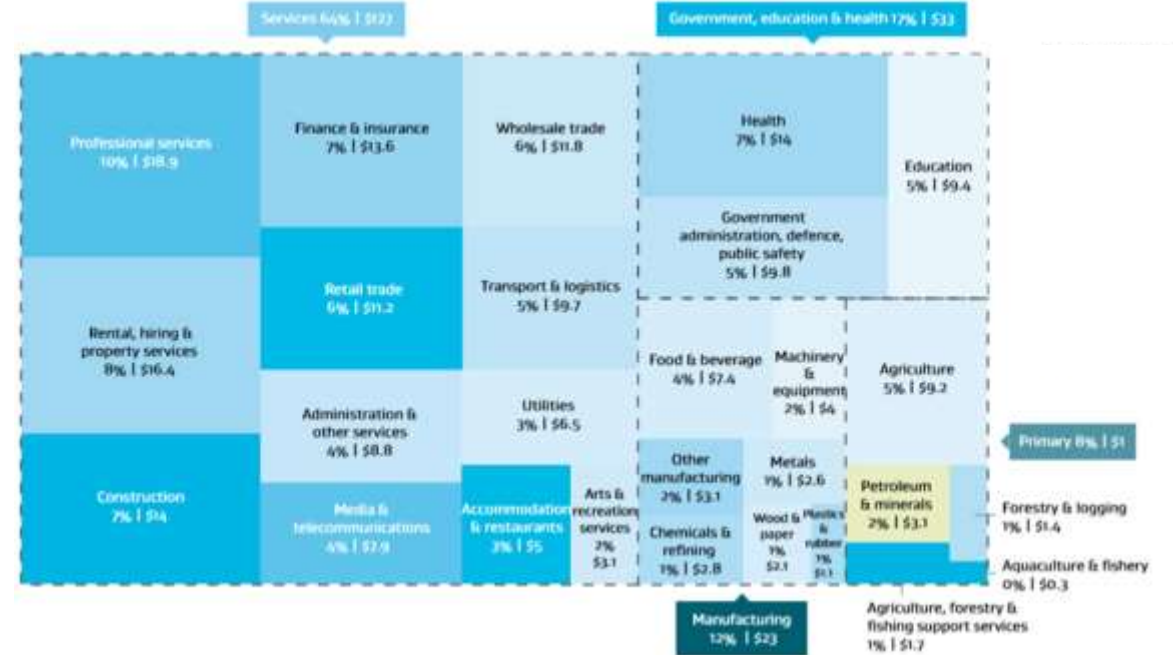
Travel
Dairy
Meat
Wood
Transport

~58%

Exports account for ~30% of GDP

Food & Bev. is ~30% of total exports

NZ Economy and Sectors



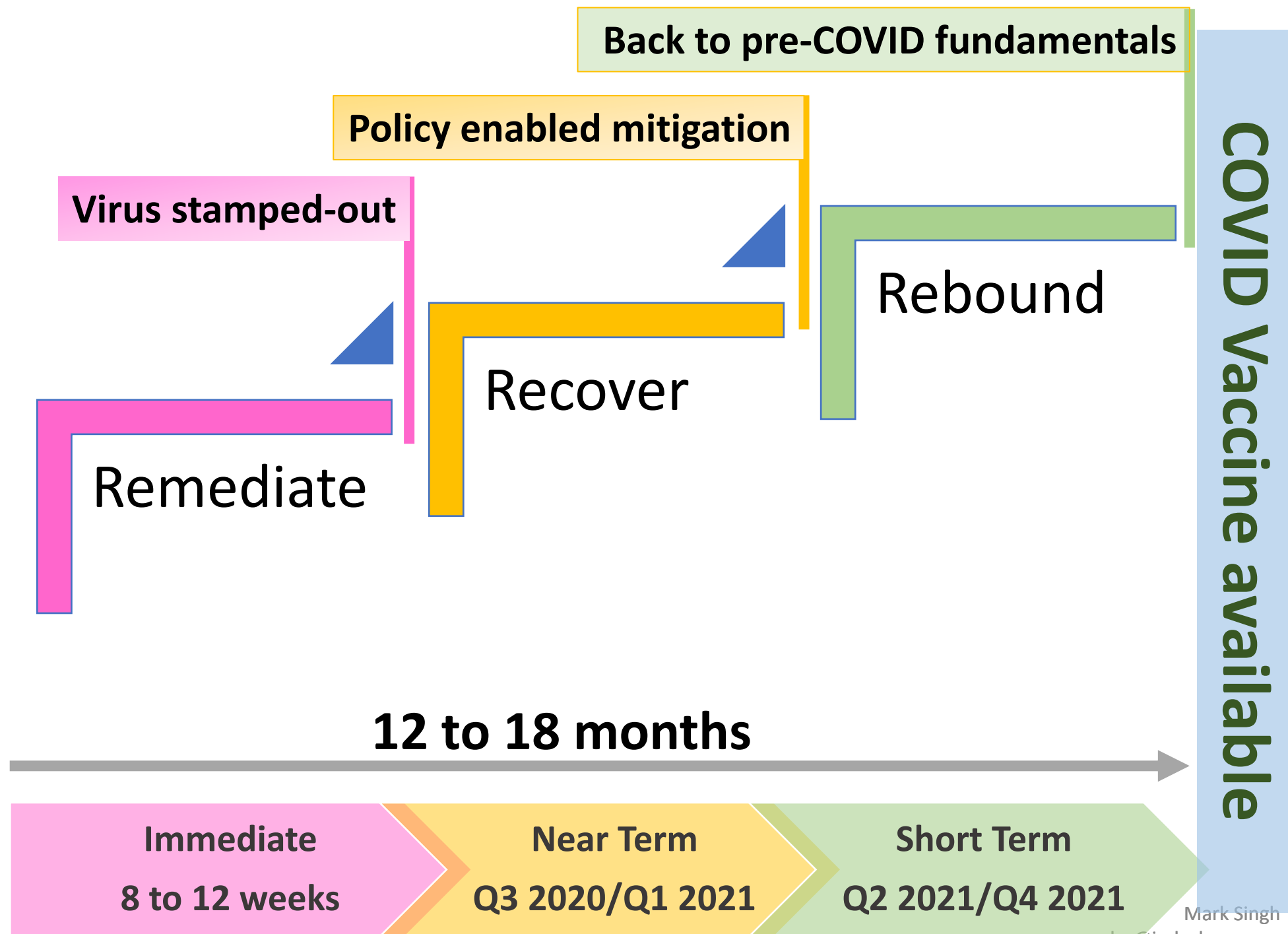
- Manufacturing – 12%
- Transport – 10%
- Primary – 8%
- Construction – 7%
- Wholesale Trade – 6%
- Retail Trade - 6%

Supply Chain drives 50% of NZ economy

COVID-19 Post Lockdown:

Supply Chain Response Framework

RESTORE



RESTORE

Top 4 Supply Chain Actions..

Remediate

- Demand impact
- Inventory Visibility
- Logistics capacity
- Production agility

Recover

- Illuminate supply network
- Alternate supply sources
- Redefine planning
- Alternate channels and route to market

A Foundational Capability

..in times of Social Distancing and Remote/WFH..way of working..



Visibility



Asset



Inventory



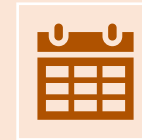
Cargo



Location



Condition



Events



Custody



Supply Chain Visibility...

My experience with deploying digital technologies that can mitigate COVID-19 triggered supply chain disruptions..

NETWORK



CLOUD



ANALYTICS



HINDSIGHT

FORESIGHT

INSIGHT

DATA



SECURITY

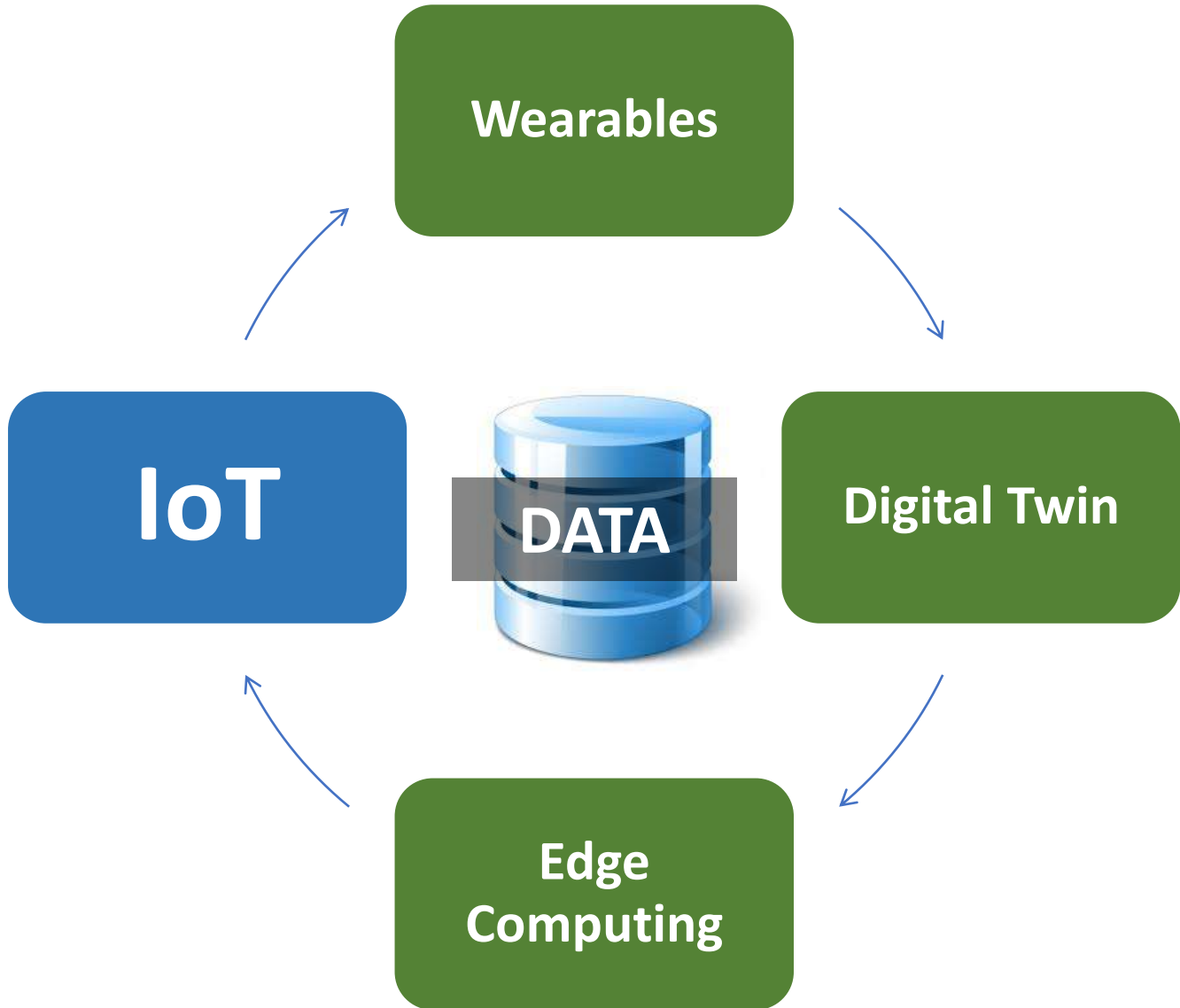


4-Building Blocks

NETWORK



CLOUD



ANALYTICS



HINDSIGHT

FORESIGHT

INSIGHT

SECURITY

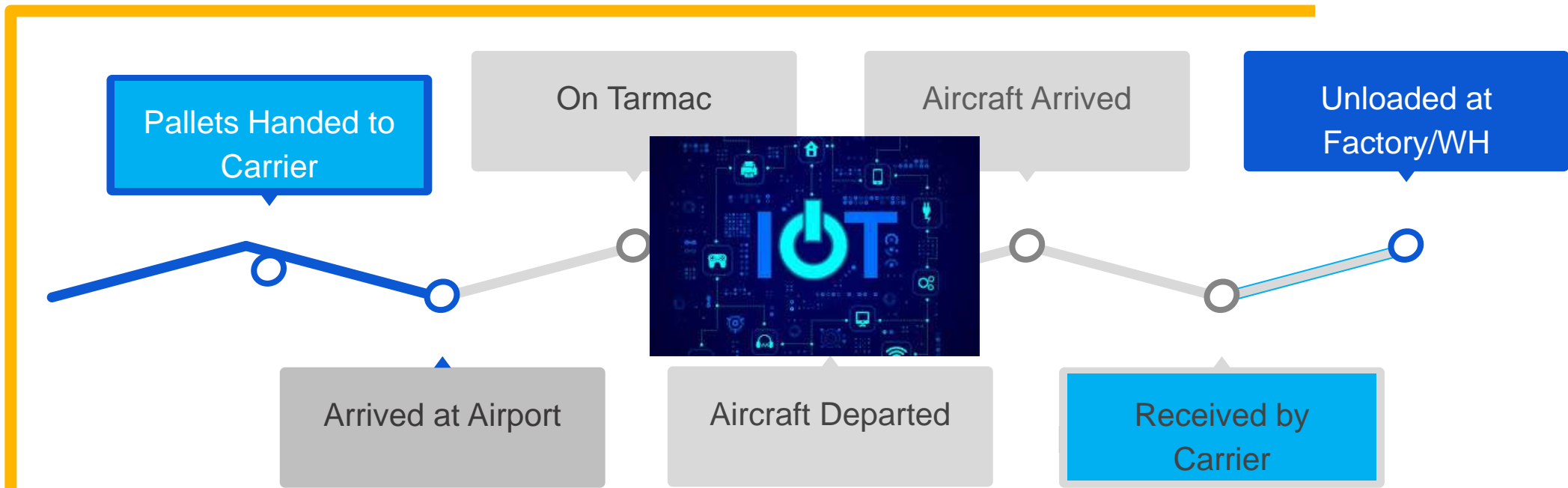


4-Core Technologies

Logistics



Real time visibility of inventory and assets



- LOCATION
- TEMPERATURE
- HUMIDITY
- LIGHT
- SHOCK
- TAMPER
- PRESSURE
- MOTION

- Voice
- SMS
- E-mail
- Webhook
- msg BOT

Construction site with over ~3000 asset units being tracked across multiple zones using BLE tags



Alerts

Seen Again, Zone Changed
min, 19 sec

SEENAGAIN Mar 4, 2020 1:20 PM EST
Seen Again, after missing: 30 min, 38 sec

SEENAGAIN Mar 4, 2020 12:49 PM EST
Seen Again, after missing: 1 hrs, 12 min, 26 sec

SEENAGAIN Mar 4, 2020 7:25 AM EST
Seen Again, after missing: 5 days, 0 hrs, 16 min, 55 sec

ZONECHANGED Mar 4, 2020 7:24 AM EST

Unit 4 x Unit 4 - 22.477953, 73.462367

Select Filter

3082 TOTAL

2764 IN FACILITY 0 IN SHIPMENT

318 NOT SEEN

Inventory per Zone

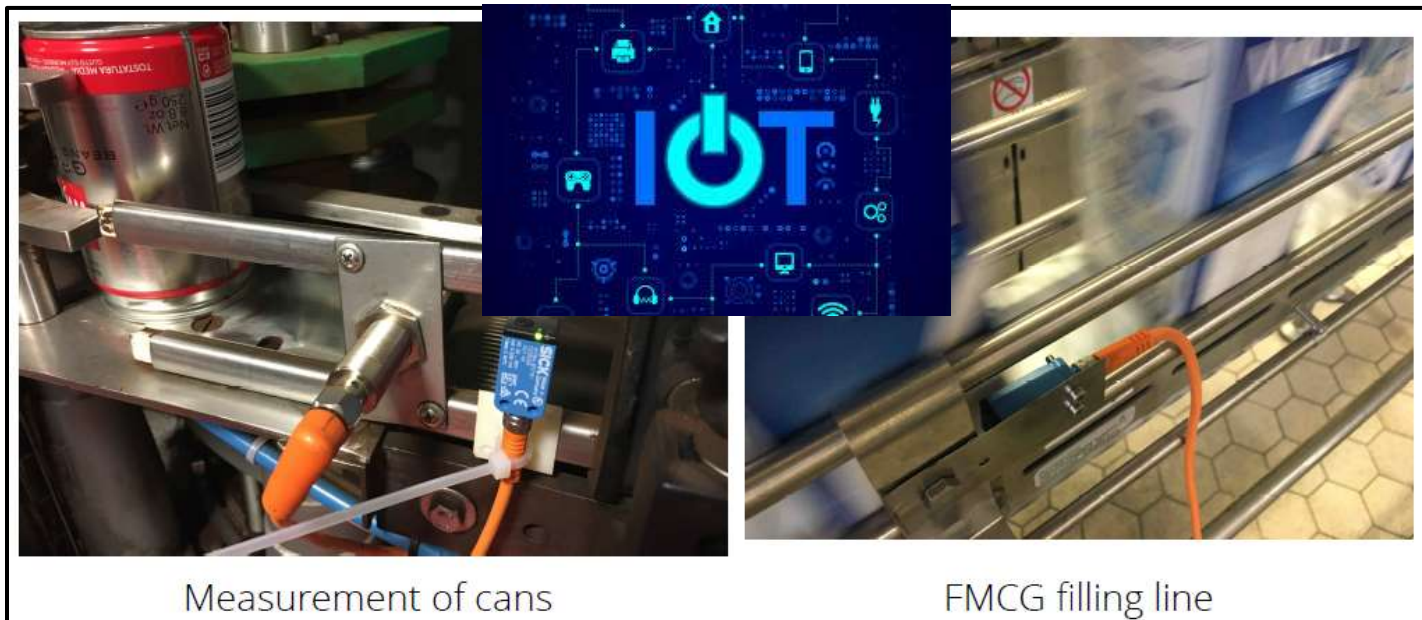
Zone	Count
ZON	~750
Fre	0
Dis	~450
C6/	~20
Roa	~100
Roa	~150
Roa	~50
D1/	~100
QC	~600

Groups

- Zones: 2764
- ZONE C: 732
- Free Zone: 3
- Dispatch: 552
- Zone D: 0
- C1/C2: 0
- C6/C7: 47
- C4/C5: 0
- Road 2: 199
- Road 1: 282

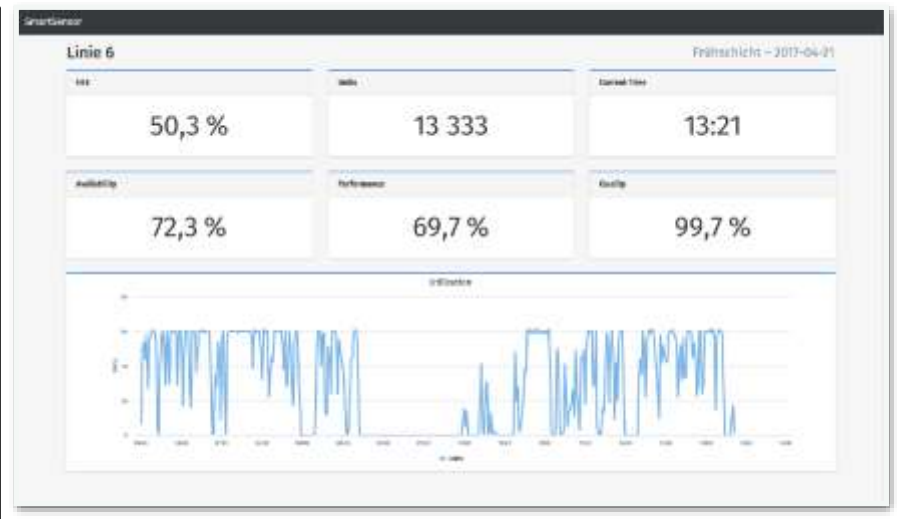
An aerial satellite-style photograph of a large construction site. The site is divided into several zones, which are outlined in blue. The zones are labeled with names like 'ZONE C', 'Free Zone', 'Dispatch', 'Zone D', 'C1/C2', 'C6/C7', 'C4/C5', 'Road 2', and 'Road 1'. The site is surrounded by trees and other buildings.

Manufacturing



Measurement of cans

FMSG filling line



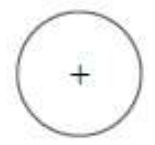
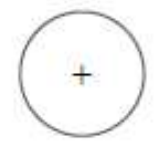
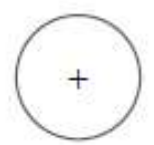
Real time visibility of machine performance

Sensor without equipment modification

Loss-reason collection via cheap consumer tablets

Easy access to reports

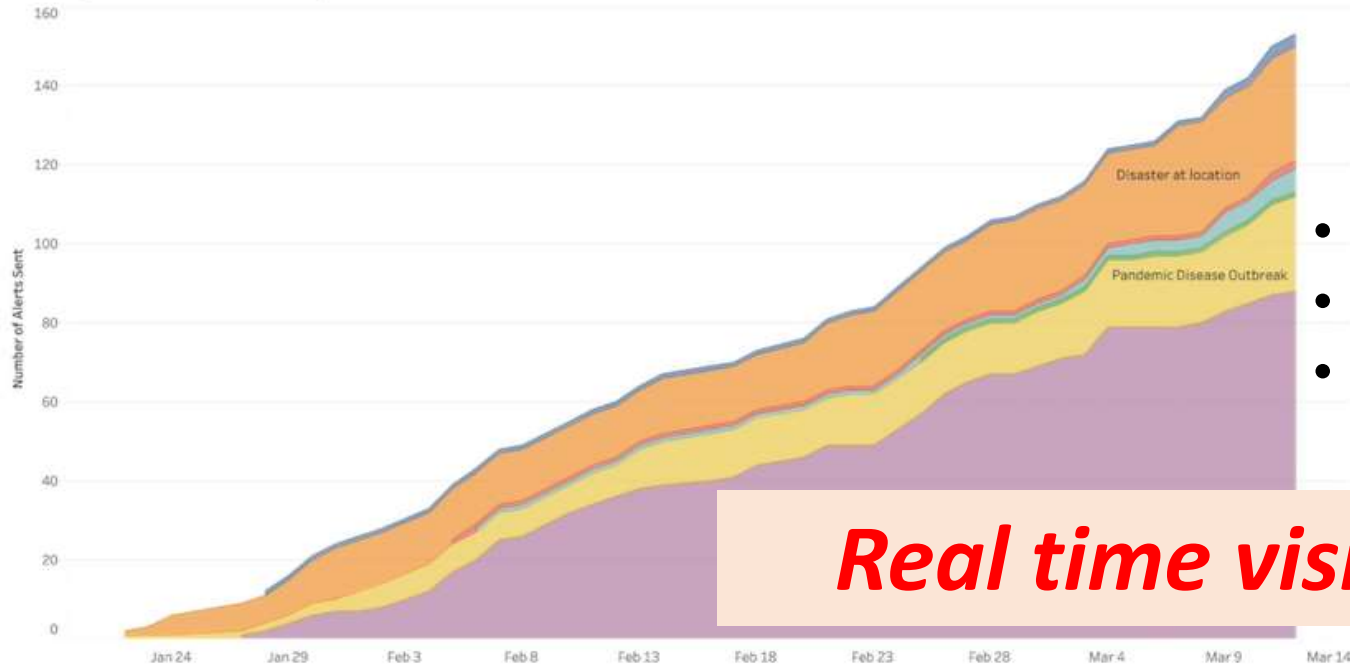
Fast, personalized alarms





Risk indicator development over time – Mar 12th

Running Total of Alerts Sent by Risk Indicator



- Risk exposure and dependencies visualised
- Risk Detection automated
- Focus on critical suppliers and partners

Real time visibility of supply network risks

Warehouse Wearable: Barcode scanning glove

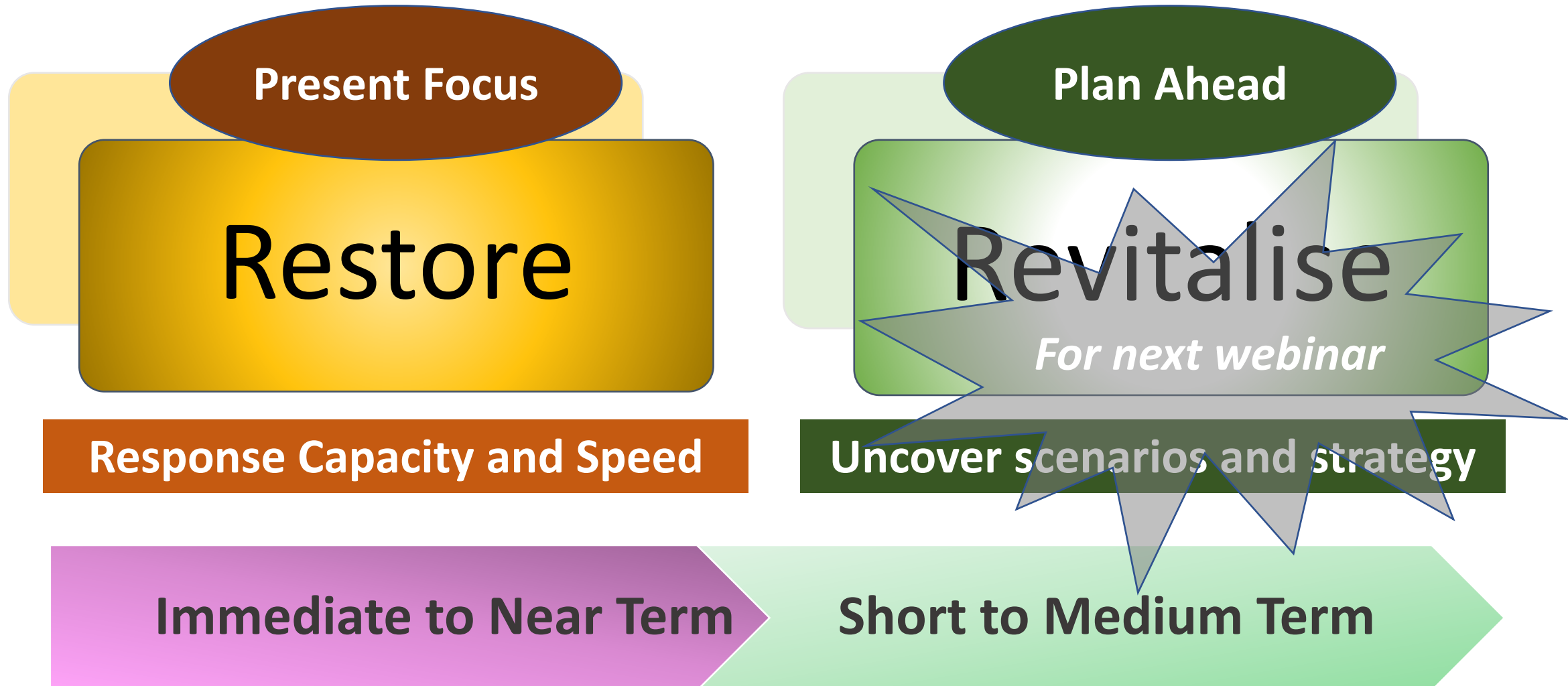


***Real-time visibility:* Construction sites**

Concrete strength sensor



COVID-19 Post Lockdown: Supply Chain Response Framework



A Wishlist for post COVID-19 world..

- ..governments will finally start spending more on **healthcare** than on *warfare*.
- ..**public health concerns** will outweigh *personal privacy issues*.
- ..**online learning platforms** go mainstream in education at all levels
- ..**specialist health professionals** get recognized like *pop or sports superstars*

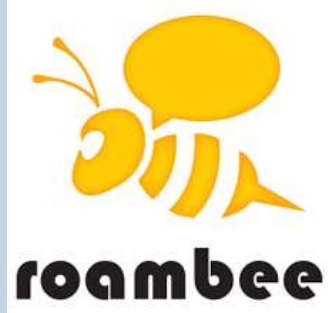
Thank You

Mark Singh

mark.s@indushaze.com

Our Digital Platform Partners

Logistics (IoT)



Industrial (IoT)



Risk Management



Process Intelligence



Procurement



Construction (IoT)



Manufacturing (IoT)

