THE EPIC DISRUPTION

INDUSTRY X.0

And how we are seeing this play out for the Supply Chain
OUR PURPOSE

Bringing innovation to improve the way New Zealanders (and Australians) live, work, play, protect and grow.

We create high-performing and intelligent businesses, governments and flourishing communities. And we do it using our unrivalled ability to deliver end-to-end services that transform, digitise, power, run and secure innovative solutions.

We are delivering on this promise when we:

- Create jobs for the people of New Zealand.
- Help New Zealand organisations be more competitive at home and abroad.
- Help governments deliver more efficient and effective services.
- Contribute positively to the wellbeing of people and communities.
OUR VISION IS TO HELP OUR CLIENTS CREATE THEIR FUTURE AND BRING INNOVATION TO THE WAY PEOPLE LIVE AND WORK

482,000 people including 4,400 people in Australia

Offices and operations in more than 200 cities in 52 countries

92 of the Fortune Global 100 are clients

We help organizations maximise their performance and achieve their vision

We develop and implement technology solutions to improve our clients’ productivity and efficiency – and may run parts of their business

Ultimately, we enable our clients to become high-performance businesses and governments
INDUSTRY X.0

The epic disruption.....
48% of ASX200 companies from 2012 are no longer listed.
DIGITIZATION IS ACCELERATING THE DISRUPTION EXPONENTIALLY…..

- Mainframe
- Client-server & PCs
- Web 1.0 ecommerce
- Web 2.0, cloud, mobile
- Big data, analytics, visualization
- IoT & smart machines
- Artificial intelligence
- Quantum computing

- 1950: Turing Test
- 1964: System/360
- 1972: SAP
- 1979: ARPANET
- 1987: PC
- 1990: System/360
- 1994: Amazon
- 1999: Salesforce.com
- 2005: Web 2.0
- 2006: AWS
- 2008: iPhone
- 2010: Self Driving Cars
- 2014, IDC: 4.4 Zettabytes of Data
- 2016: Pokemon Go

TFXK 1997: Big Data
TFXK 1999: IoT, M2M
TFXK 2007: IBM Deep Blue
TFXK 2010: Sales of PC Peak
TFXK 2014: Big Data, Analytics, Visualization
CAN YOU IMAGINE?

EVERYTHING 10X BETTER?
WHAT IS INDUSTRY X.O?

INDUSTRY X.O is the Digital Reinvention of Industry, where businesses use advanced digital technologies to transform their core operations, their worker and customer experiences and ultimately their business models. New levels of efficiency are achieved in the core of R&D, engineering, production, manufacturing and business support through integrated systems, processes, sensors and new intelligence. Worker and customer experiences are reimagined and redesigned through personalization and advances such as immersive, augmented and virtual reality. New business models and revenue streams are unlocked by smart, connected products, services and plants that are enabled by new ecosystems.
SUBSTANTIAL IMPROVEMENTS
Can be achieved throughout the product journey

- **MORE WORKER EFFECTIVENESS**
  - Predictive/Prescriptive Maintenance
  - Automated Field Service
  - Service Optimization

- **MORE SYSTEMS PLANNING & ARCHITECTING**
  - Software Driven Innovation
  - Systems Engineering

- **MORE QUALITY**
  - Connected Assets
  - Closed Feedback Loop

- **MORE INTERACTION WITH PRODUCT**
  - Product Visualization for Digital Selling
  - Real-time Product Usage Insights & Customer Feedback
  - New Digital Services & Business Models

- **MORE FLEXIBLE PRODUCTION**
  - Industrial IoT Enablement
  - Additive Manufacturing
  - Hyper-personalization
  - Analytics

- **LESS PHYSICAL TESTING**
  - Simulation
  - Digital Mock Up
  - Digital Twin

- **FASTER PRODUCTION RAMP-UP**
  - Digital Production Planning, Digital Factory
  - Virtual Commissioning

- **BETTER COMPONENTS**
  - Rapid Prototyping
  - Generative Design
  - Software Hardware Integration

- **BETTER COLLABORATION**
  - With Suppliers, Partners
  - Internal Teams

- **BETTER PRODUCTS, SERVICES & EXPERIENCES**
  - Crowdsourcing
  - Design Thinking
  - Outcome Driven Innovation

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X.O MEETS SUPPLY CHAIN
Some emerging examples...
# X.0 SHOW CASE TRENDS FOR SUPPLY CHAIN

## #1 Human + Machine

- **HUMAN ONLY ACTIVITY**
- **HUMAN-MACHINE RELATIONSHIPS**
- **MACHINE ONLY RELATIONSHIP**

*The missing middle*

## #2 Connected Ecosystems

*Breaking down silos in the health supply chain*

## #3 A Supply Chain for One

*Consumer Centricity*
### CONTEXT

Expected shift in workforce composition over the next 3 to 5 years....

A renewed focus on the workforce will decide winners and losers....

Need to shift our thinking from replacement of humans.... To augment and fusion of skills...

<table>
<thead>
<tr>
<th>Role</th>
<th>Technology</th>
<th>Human</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply chain managers</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>Logistic Managers</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>Planners</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>Process &amp; system engineers</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>Transportation planners</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>Order fillers and warehouse operators</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>Storage distribution managers</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Customer service reps</td>
<td>50%</td>
<td></td>
</tr>
</tbody>
</table>

- **AI/RPA**
- **Adaptive Workforce**
- **Fixed Workforce**
### Human-Machine Relationship

<table>
<thead>
<tr>
<th>Humans Enable Machines</th>
<th>Machines Augment Humans</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Train</strong></td>
<td><strong>Amplify</strong></td>
</tr>
<tr>
<td><strong>Explain</strong></td>
<td><strong>Interact</strong></td>
</tr>
<tr>
<td><strong>Sustain</strong></td>
<td><strong>Embody</strong></td>
</tr>
</tbody>
</table>

#### Human Only Activity
- **Create**
- **Lead**
- **Judge**
- **Improvise**

#### Machine Only Activity
- **Transact**
- **Iterate**
- **Predict**
- **Evolve**

#### Human-Machine Relationship Details
- **Humans train AI for performance**
- **Humans make AI explainable**
- **Humans make AI sustainable**

#### Tasks and Roles
- **Task training**: data hygienist, interaction modeler
- **Human-ness training**: empathy trainer, personality trainer, worldview and localization trainer
- **Algorithms**: algorithm forensics analyst
- **Output**: transparency analyst, explainability strategist
- **Limits setting**: context designers, AI safety engineers
- **Oversight**: ethics compliance managers, automation ethicists, machine relations managers
Delivering via drones, remote mining, manufacturing customized automobiles

Guiding customers through a process, humanoid robots answering questions

Selecting the right tools for diagnoses, designing furniture, maintaining industrial equipment

Machines embody physical aid

Machines give UI personality

Machines augment with powerful insight
Three fusion skills are critical to working on the left side of the missing middle.

Three fusion skills are critical to working on the right side of the missing middle.

The bottom two skills require focus across the missing middle.
AMPLIFICATION EXAMPLE – LOGISTICS SUPPORT
INTERACTION / EMBODIMENT EXAMPLE – DONNA THE SUPER BOT
OPERATIONS ENGAGEMENT & EXECUTION IN THE NEW....

SYSTEMS OF CONTROL

WEB

MOBILE

CHAT

VOICE

SYSTEMS OF ENGAGEMENT

CONVERSATIONAL INTELLIGENCE

INSIGHTS & ANALYTICS

SYSTEMS OF RECORD

SAP Hybris

SAP Ariba

Servicenow

Active Directory

bmc REMEDY

salesforce

amazon alexa

Workplace by Facebook

Microsoft Teams

slack

SAP Hybris

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Consumer Centricity
HEALTH ECOSYSTEM

BLOCKTRAIN

BACKGROUND
UniSA and Accenture launched a unique partnership that aims to foster closer ties between business and academia to collaborate on improving the lives of citizens and local communities. The Innovation Garden was set up in the Innovation Collaborative Centre (ICC) with a focus on solving complex problems in health.

TECHNOLOGY
One of the latest demonstration that we built is a cyber-physical structure using distributed ledger, IoT, AR technologies to show case how X.0 concepts could be achieved in the healthcare supply chain.

VALUE
At a Marco level, digital transformation in the health could shift from population-base or activity-based funding model to patient centric value-based model. The traditional silos within health could be addressed through disruptive technologies.
ECOSYSTEM EXAMPLE – THE BLOCKTRAIN
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Consumer Centricity
Supply chains must provide customized solutions that offer value to every customer.

Companies must become customer-centric to remain competitive, growing to serve the “segment of one.”
This new customer-centric environment requires a fast turnover and tailored experience. Executives must embrace an entirely new way to architect and manage supply chains.

This architecture will evolve as marketplace needs evolve. Companies will need new supply chain configurations across the broader ecosystem, a reinvented operating model, and new digital technologies.
HOW DO WE GET THERE?
Disruption is the new normal, it’s time to act.
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