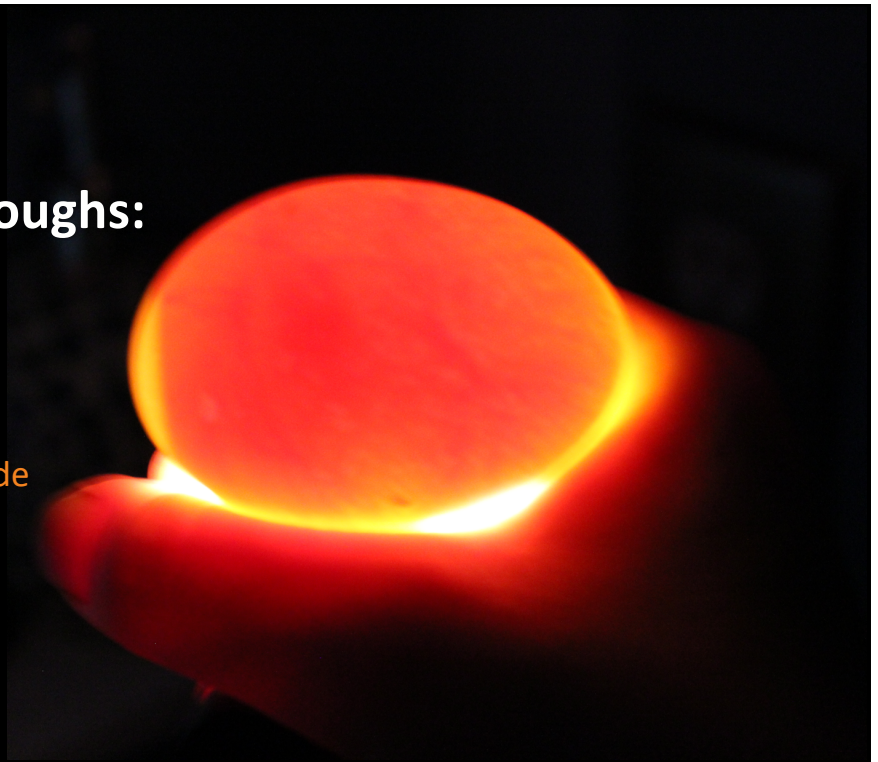SOUTH AUSTRALIAN SPACE INDUSTRY CENTRE

Building Breakthroughs:
THE AUSTRAILIAN SPACE INNOVATION IMPERATIVE

6th SA Space Forum, Adelaide

December 2018

DOBLIN Deloitte.

SPOTTING THE BIG SHIFTS...

Categories transform in ways that have patterns. Leaders actively embrace eras as they emerge.

Leaders ought to lead: whatever else you do, focus on transforming sectors...

1

Now and then an industry changes fundamentally….

3

ADVENT OF THE MIT MEDIA LAB, 1985

How Nicky Negroponte saw around corners…

One fast way to transform an industry is to develop new, open standards and platforms that redefine what's possible and drive vast new growth…

Sometimes revolutions come in corrugated steel…

Creating a standard shipping container changed the world. First it made "globalization" feasible—creating millions of jobs, surprising extensions followed.*

Shipping was a manual process requiring multiple transfers from ship to dock to rail to buggy.

Total Port Handling 1980-2011

The standard shipping container ushered in our global economy and redefined what could be shipped at what costs…

(in millions of TEUs)

'80 '81 '82 '83 '84 '85 '86 '87 '88 '89 '90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11

1862   1955   2012

Low-weight, tear-resistant, water-repellant, zero-porosity, high-stability, fast-handling sails

High compression-load-withstanding, wind-resistant mast with twisting rig

Adjustable-angle, sensor-triggered trim tab to increase the lift of the keel sail

"Intelligent" sails with optical fiber sensors

Short, stubby rudder for maximum maneuverability and minimum drag

Delamination-resistant adhesion between skin and core layers

Strong, rigid, incredibly light, low-porosity hull constructed from a composite sandwich

"Intelligent" hull with optical fiber sensors

Wetted-surface-drag and form-drag minimizing bulb

21ST CENTURY INNOVATION PRINCIPLE

Modern innovation is more about elegant integration than invention…

Asset light
Fast
Smart
Connected
Distributed
Decentralized
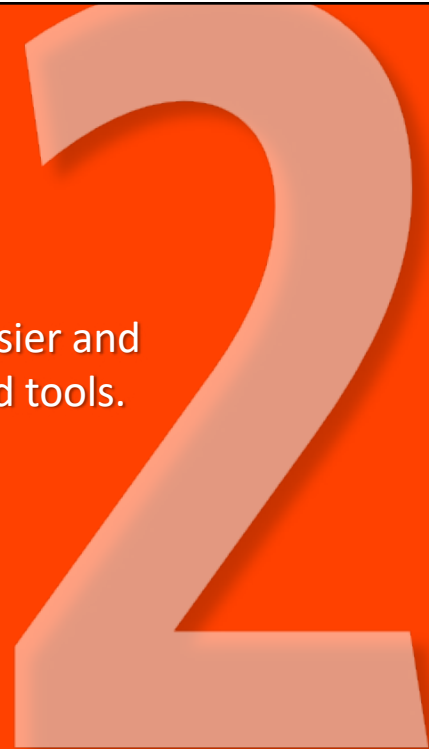*Shared*
Porous
Rated
Open

8

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INNOVATION TRADECRAFT

Innovation is always tough. It gets vastly easier and more reliable when you do it with advanced tools.

Focus on addressing this
within your own firm…

2

A STRONG POINT OF VIEW

Ten Types of Innovation: a deep look at the discipline of innovation.

- More than *$6.8 million of innovation effectiveness R&D* condensed into a concise guidebook

- Reveals both how to *create successful innovations* and to *install a deep innovation competence*

- Helps teams *root out lore and substitute logic*; move *beyond myths to methods*

- Provides *deep tactics* and reveals how to build a *signature innovation playbook*

TEN TYPES OF
INNOVATION
THE DISCIPLINE OF
BUILDING BREAKTHROUGHS

LARRY KEELEY
RYAN PIKKEL, BRIAN QUINN, HELEN WALTERS

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TEN TYPES OF INNOVATION

Successful innovators innovate beyond products and integrate 5⁺ types...

TEN TYPES OF INNOVATION

BOLDER CONCEPTS   **EASIER TO IMPLEMENT**   **HARDER TO COPY**

Network
Connections with others to create value

Process
Signature or superior methods for doing your work

Product System
Complementary products and services

Channel
How your offerings are delivered to customers and users

Customer Engagement
Distinctive interactions you foster

Profit Model	Network	Structure	Process	Product Performance	Product System	Service	Channel	Brand	Customer Engagement
CONFIGURATION				OFFERING		EXPERIENCE			

Profit Model
The way in which you make money

Structure
Alignment of your talent and assets

Product Performance
Distinguishing features and functionality

Service
Support and enhancements that surround your offerings
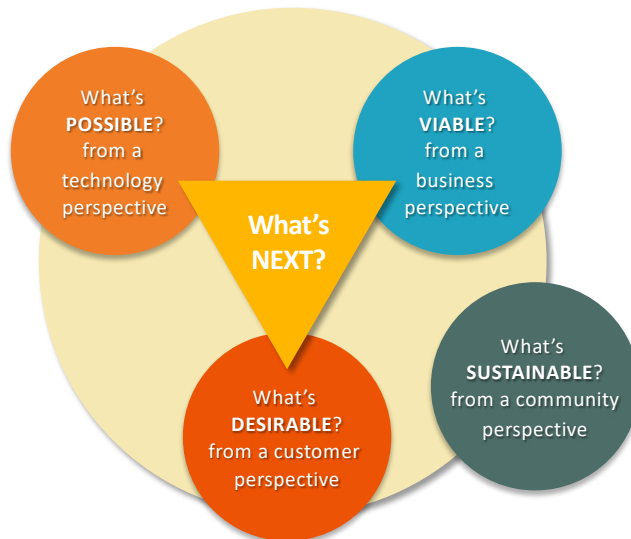
Brand
Representation of your offerings and business

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BUILDING BREAKTHROUGHS

Balanced breakthroughs: a simplified model for framing, designing, and developing sophisticated innovations

What's **POSSIBLE**? from a technology perspective

What's **VIABLE**? from a business perspective

What's **NEXT?**

What's **DESIRABLE**? from a customer perspective

What's **SUSTAINABLE**? from a community perspective
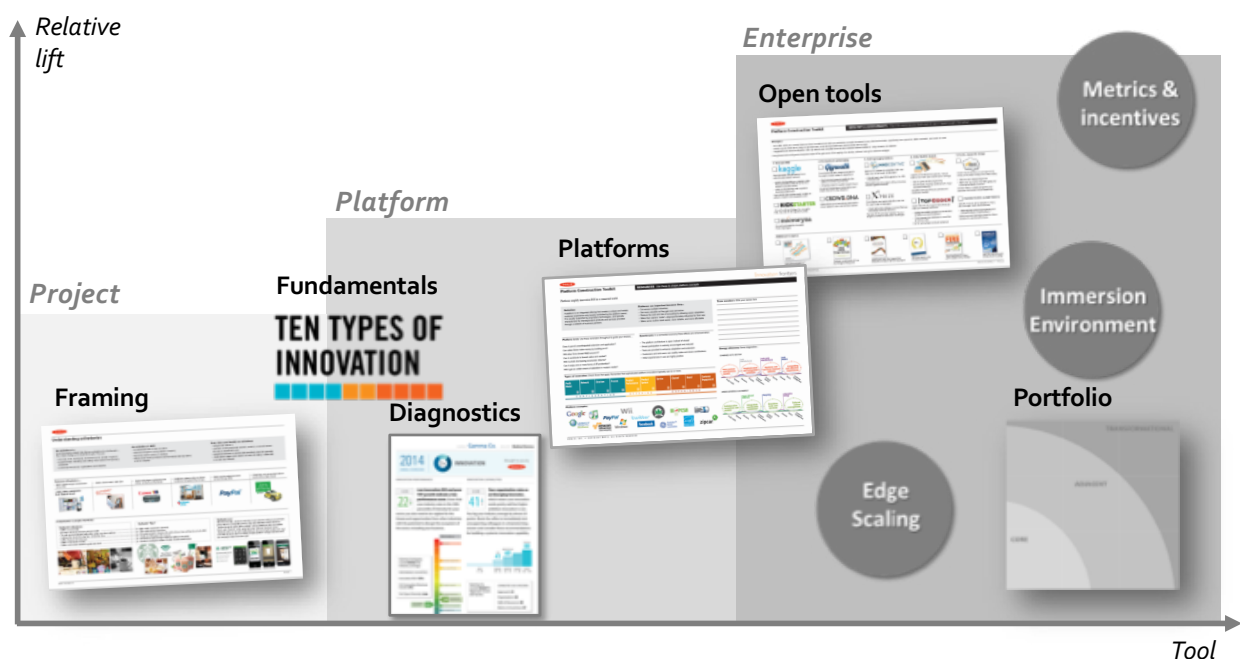
Breakthroughs come from:
- *Five or more TYPES*
- *All three COLORS used*
- *Careful outflanking of others in your category*

13
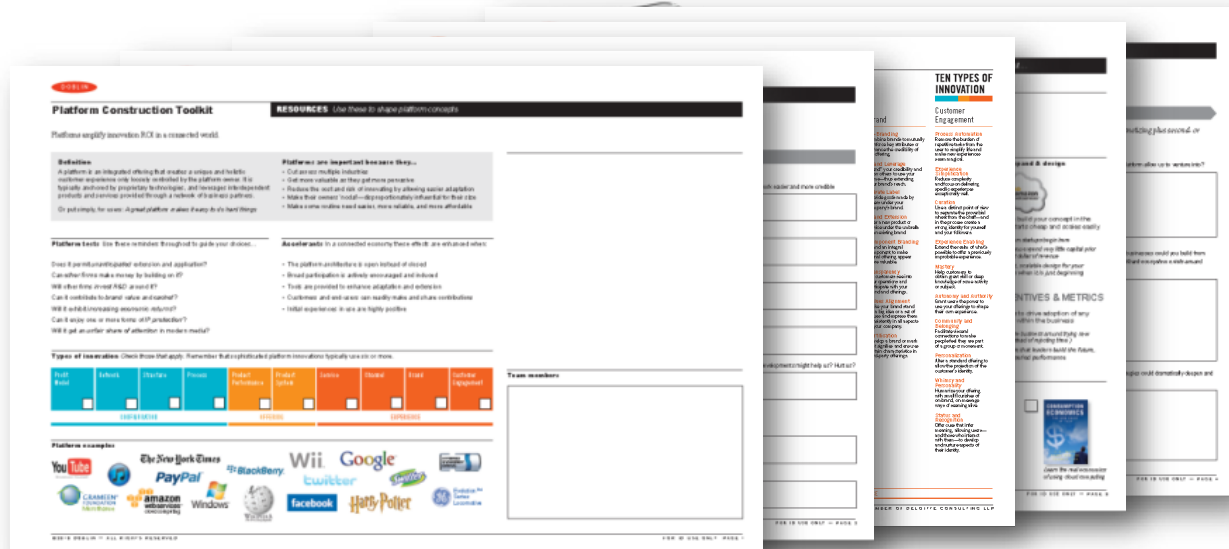

UNDERSTANDING THE **EFFECTS OF DISCIPLINED INNOVATION**

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Relative lift

Enterprise

Open tools

Metrics & incentives

Platform

Platforms

Immersion Environment

Project

Fundamentals

TEN TYPES OF INNOVATION

Framing

Diagnostics

Portfolio

Edge Scaling

Tool

Moving beyond brainstorming…

DIFFERING DEGREES OF INTERVENTION

What you achieve is a function of what you are willing to install…

Best
- *Metrics throughout the firm*
- *Incentives for leaders to sponsor growth initiatives*
- *High potential young people to author growth initiatives*

Hit rate ≈ 70%⁺ — 14x

Better
- *Deep innovation "themes"*
- *Best in class platforms*
- *Lightweight innovation: clouds crowds, partners & prizes*
- *Clear sense of ecosystems shifts*

Hit rate ≈ 50%⁺ — 10x

Good
- *Signature tradecraft*
- *Diagnostics*
- *Center of excellence*
- *Measurable "innovation intent"*

Hit rate < 5%

Hit rate ≈ 35%⁺ — 7x

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SHARED THEMES & PLATFORMS

When an entire field needs to change, work with others to achieve carefully articulated goals.

*Focus on addressing this **with others in the region collectively...***

3

PLATFORMS ARE THE NEW MINIMUM VIABLE SOLUTION

Platforms matter...

All the important stuff now cuts across companies and markets

18

A platform...

*is an integrated offering that creates
a unique and holistic customer experience only
loosely controlled by the platform owner;*

*It is typically anchored by proprietary technologies,
and leverages interdependent products and services
provided through an ecosystem of business partners.*

*Or put simply, for users:
A great platform makes it easy to do hard things*

INNOVATION ASSESSMENT: **GOOGLE**

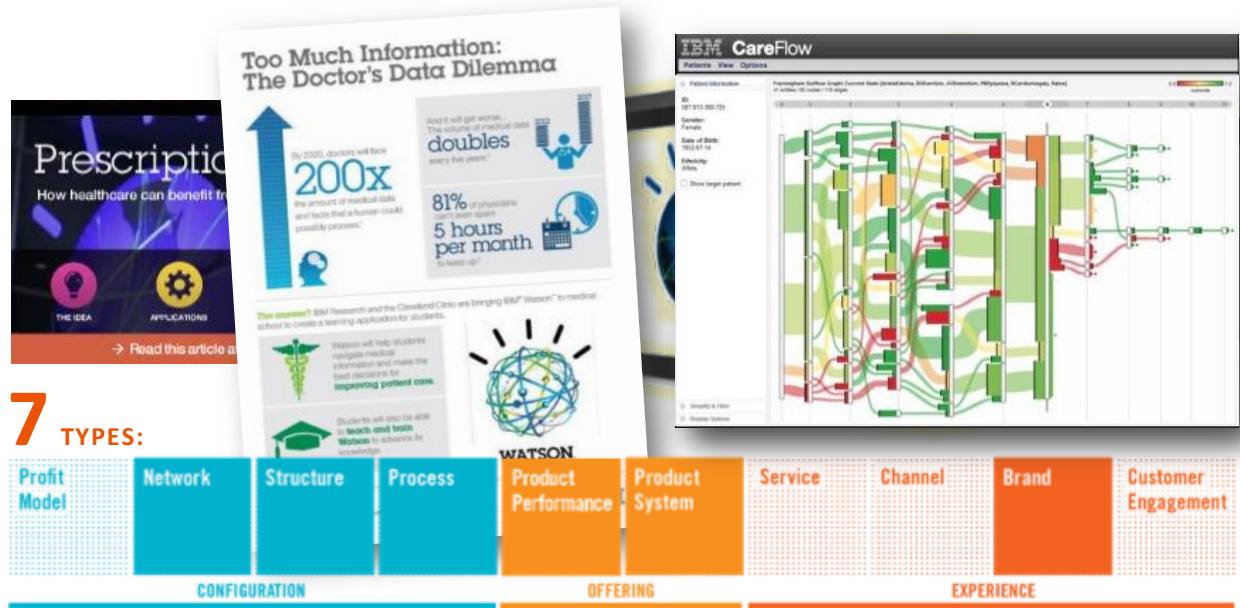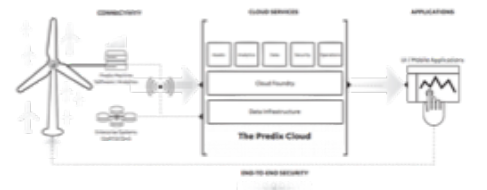**9** TYPES:

Profit Model	Network	Structure	Process	Product Performance	Product System	Service	Channel	Brand	Customer Engagement
	CONFIGURATION			OFFERING		EXPERIENCE			

20

INNOVATION ASSESSMENT: **IBM WATSON**

Cognitive computing adapted to medicine

7 TYPES:

Profit Model	Network	Structure	Process	Product Performance	Product System	Service	Channel	Brand	Customer Engagement
	CONFIGURATION			OFFERING		EXPERIENCE			

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INNOVATION ASSESSMENT: **GE PREDIX**

Converging digital and physical advances to drive huge productivity gains

9 TYPES:

Profit Model	Network	Structure	Process	Product Performance	Product System	Service	Channel	Brand	Customer Engagement
	CONFIGURATION			OFFERING		EXPERIENCE			

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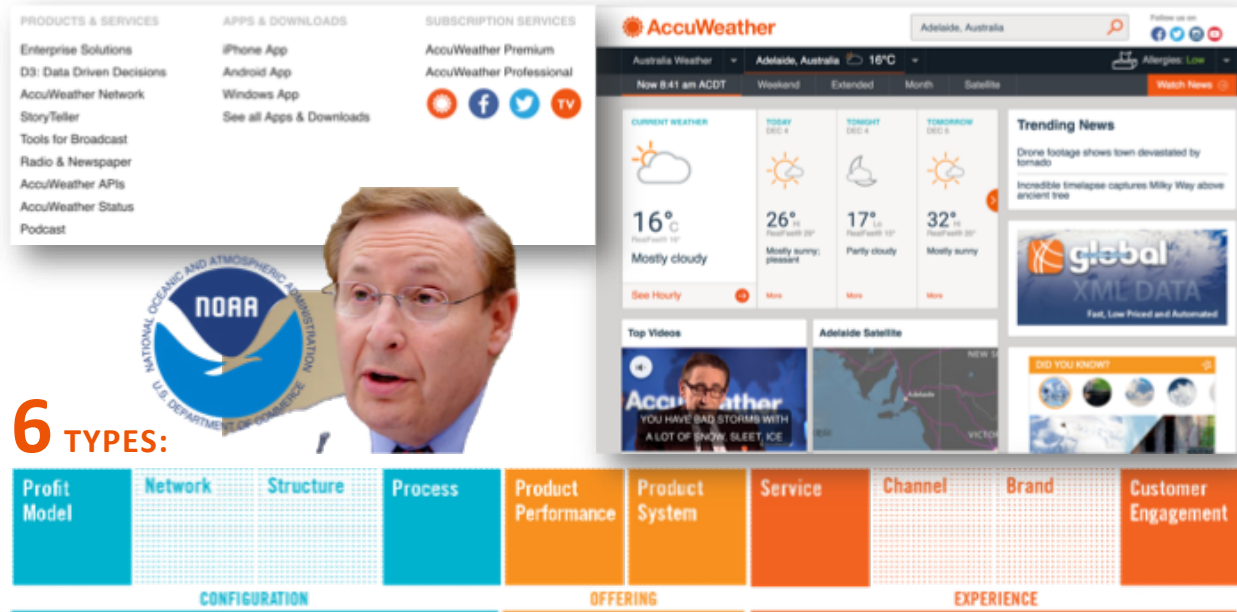
ACCUWEATHER: INNOVATION ASSESSMENT

Leading for profit business built entirely upon US government data sources

6 TYPES:

Profit Model	Network	Structure	Process	Product Performance	Product System	Service	Channel	Brand	Customer Engagement
CONFIGURATION				OFFERING		EXPERIENCE			

LIGHTWEIGHT INNOVATION IN A NUTSHELL: CLOUDS, CROWDS, PARTNERS & PRIZES

Faster, more iterative development—with radically more open methods

1. Catalyze & develop concepts	2. Discoveries & prototypes	3. Solve tough problems	4. Initial build & pilot test	5. Scale, expand & roll out
Identify and select the specific, robust tactics you can use to build your concept	Crowd source fast, cheap answers to focused market research questions	Drive sophisticated pattern recognition from a distributed expert network	Use open networks to both accelerate and lower the cost of custom code	Leverage cloud architectures to radically lower the cost of digital innovation
	Gigwalk	kaggle	[TopCODER]	amazon web services
Use crowd funding to financially support and catalyze new idea development	*Quickly prototype and test physical objects using 3D printing*	*Use open challenges and prizes to solve intractable or tough challenges*	*Rethink where and how to pilot products*	*Co-construct with consumers to expand current offerings and find future ones*
KICKSTARTER indiegogo	3DSYSTEMS	XPRIZE DARPA	TESCO	LEGO

24

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INNOVATION ASSESSMENT: **ROCKET LAB**

Low cost, delivery system designed for routine, frequent small satellite launches

ROCKET·LAB

ELECTRON

4 TYPES:

Profit Model	Network	Structure	Process	Product Performance	Product System	Service	Channel	Brand	Customer Engagement
CONFIGURATION				OFFERING		EXPERIENCE			
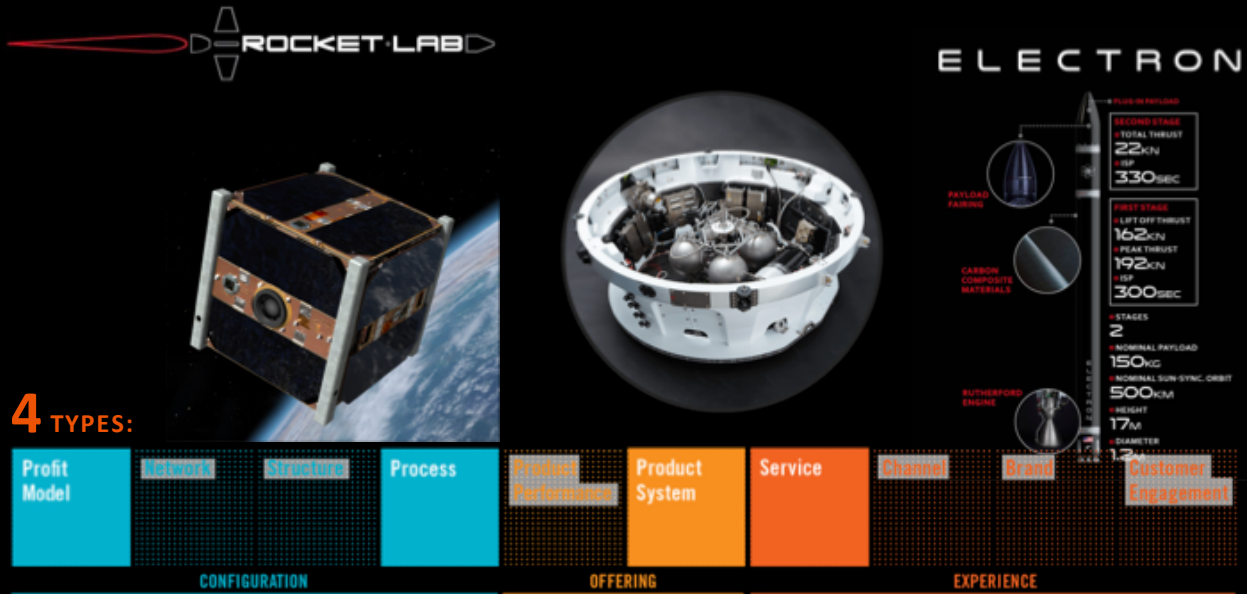
CLIMATE CORPORATION: INNOVATING AROUND CLIMACTIC UNCERTAINTY

Analytics, modeling, and rapid service for the "Age of Precision" Agriculture

THE CLIMATE CORPORATION

PEACE OF MIND
- Profit Protection
- Complements Federal Crop Insurance
- Hassle-Free Coverage

FINANCIAL STABILITY

Get your FREE WEATHER RISK ANALYSIS
County or Zip Code
Corn
Get Started

TWI CORN 2012 TOTAL WEATHER INSURANCE
Start Weather Risk Report

CLIMATE FIELD VIEW

Total Weather Insurance
Protect Your Profits From Bad Weather

"For each location, we have simulated the weather for the next 730 days, 10,000 times."

Get Your Weather Risk Report | Get Custom Weather Insurance Plan | Weather Happens | Get Paid Automatically

6 TYPES:

Profit Model	Network	Structure	Process	Product Performance	Product System	Service	Channel	Brand	Customer Engagement
CONFIGURATION				OFFERING		EXPERIENCE			

26

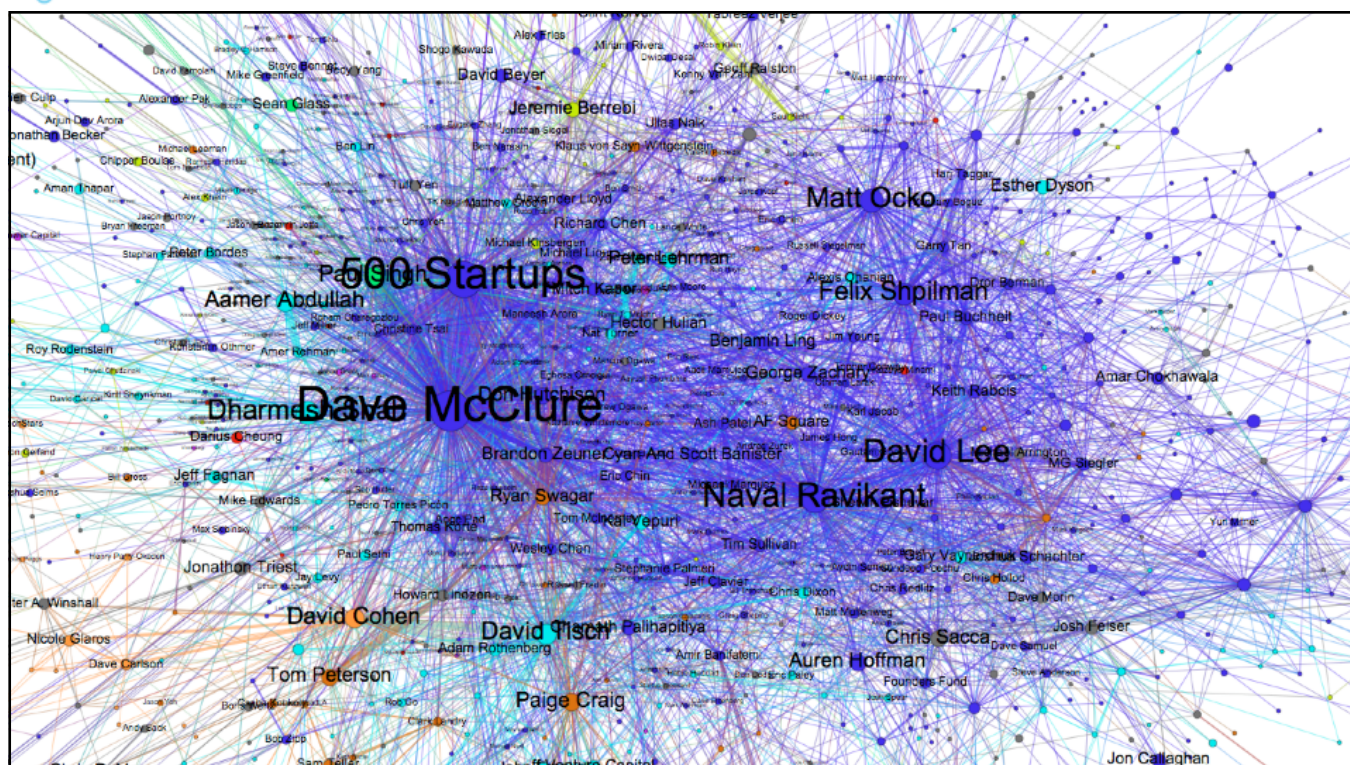Deloitte.

ECOSYSTEMS AMPLIFY VALUE...

In a connected world, winners orchestrate entire industries in new ways.

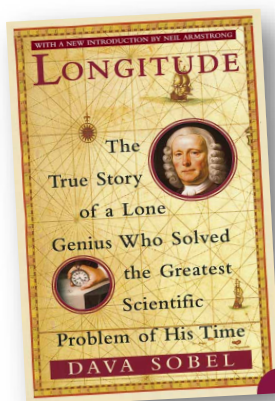*Address this **with strong platforms that orchestrate many partners...***

4

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PRIZES DRIVE INNOVATION WITH BIG PAYOFF

Prizes have a deep innovation history—and fresh modern relevance

AMAZON BLUE ORIGIN INNOVATION ASSESSMENT

Blue Origin moves Cloud Computing infrastructure into space...

7 TYPES:

Profit Model	Network	Structure	Process	Product Performance	Product System	Service	Channel	Brand	Customer Engagement

CONFIGURATION · OFFERING · EXPERIENCE

6TH SA SPACE FORUM, ADELAIDE, DECEMBER 2018

Go get 'em!

For access to today's notes:
clientweb.doblin.com

Event Code: **SA Space Forum**

Questions?
Larry.Keeley@doblin.com

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