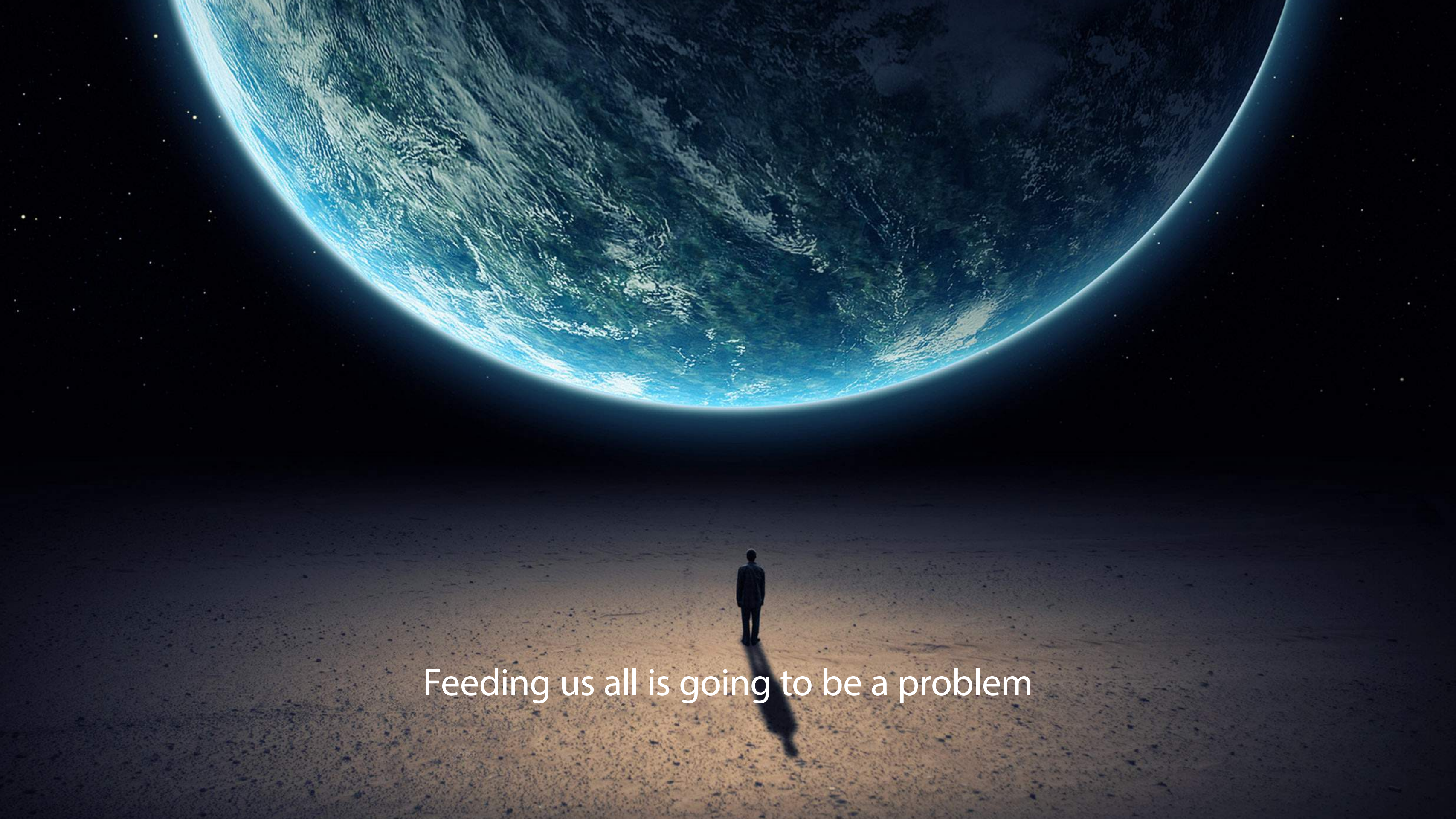


The Innovative Supply Chain that will Feed the World

With the world demanding higher quality food and more of it, Australia can reap the economic rewards of selling outstanding product around the globe. To achieve this we must overcome the tyranny of distance, challenges on quality and quantity, shelf-life, new product development and innovation across the supply chain. Australia's impact on the global food marketplace will be determined by those who can innovate their way to efficiency.







Feeding us all is going to be a problem

The Innovative Supply Chain that will Feed the World

Brett Wiskar

Commercial Technology Director - Wiley

www.wiley.com.au/futurefoodBNE/



design build & maintain food manufacturing processes & facilities
so our clients can produce safe quality food for their customers.

What am I responsible for...

I look at digital innovation, data (big & small), strategy,
business models & the future of our industries & markets.

why

We believe in making a difference & creating a better future

how



With spirited curiosity, we plan perfectly, design elegantly & deliver results

what

We Design Build & Maintain food manufacturing processes & facilities,
so that our clients can produce safe, quality food for their customers



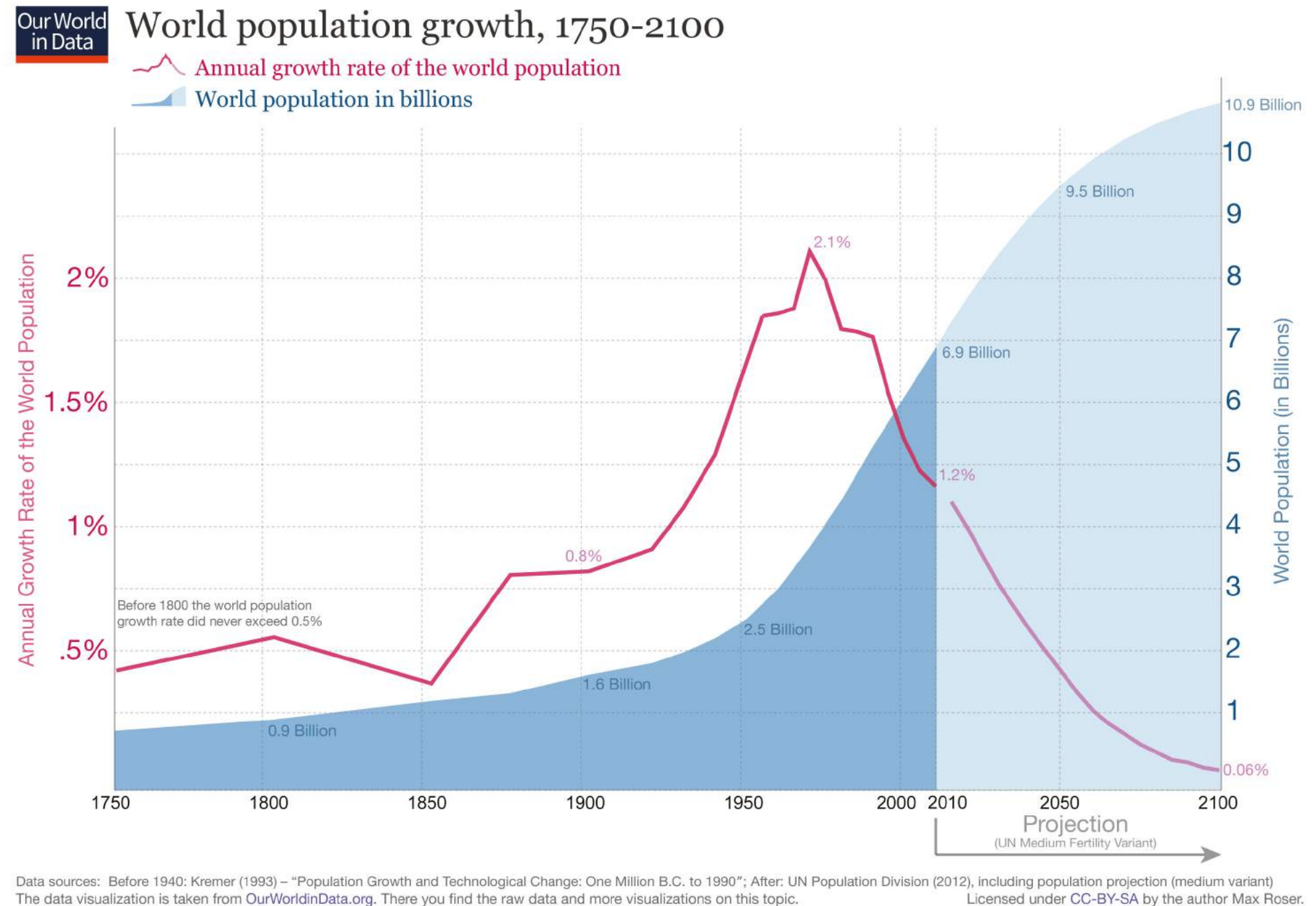
I HAVE GOOD NEWS
... & I have bad news

World population: Who's Going Up and Who is Going Down?

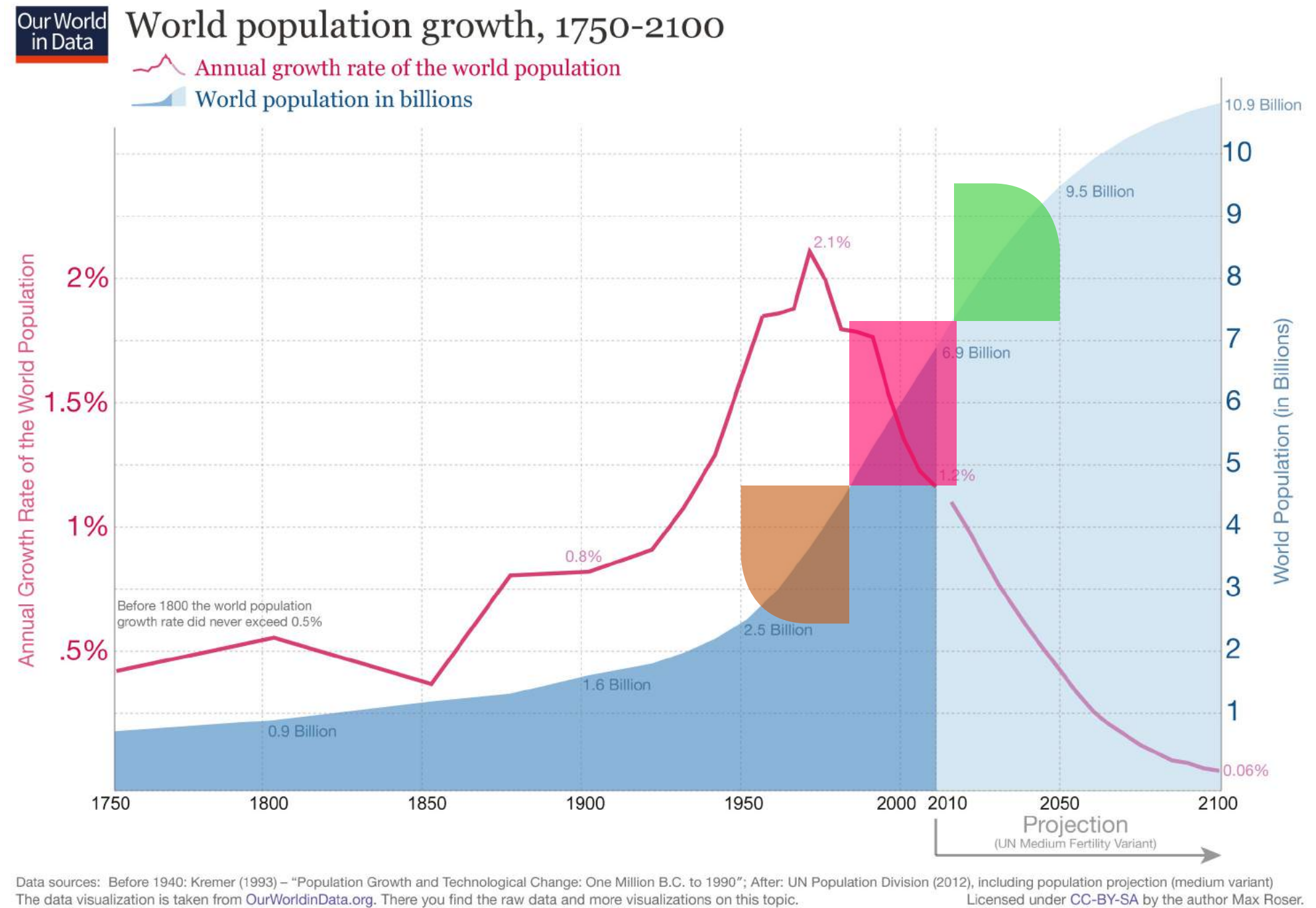
	2010	2030	2050
	- billion-		
World	6.9	8.2	9.0
Africa	1.0	1.5	2.0
Asia	4.1	4.8	5.1
Europe	0.7	0.7	0.7
Latin America & Caribbean	0.6	0.7	0.8
North America	0.3	0.4	0.5
Oceania	0.04	0.04	0.05

Source: UN (population scenario planning)

Good news...



Good news...

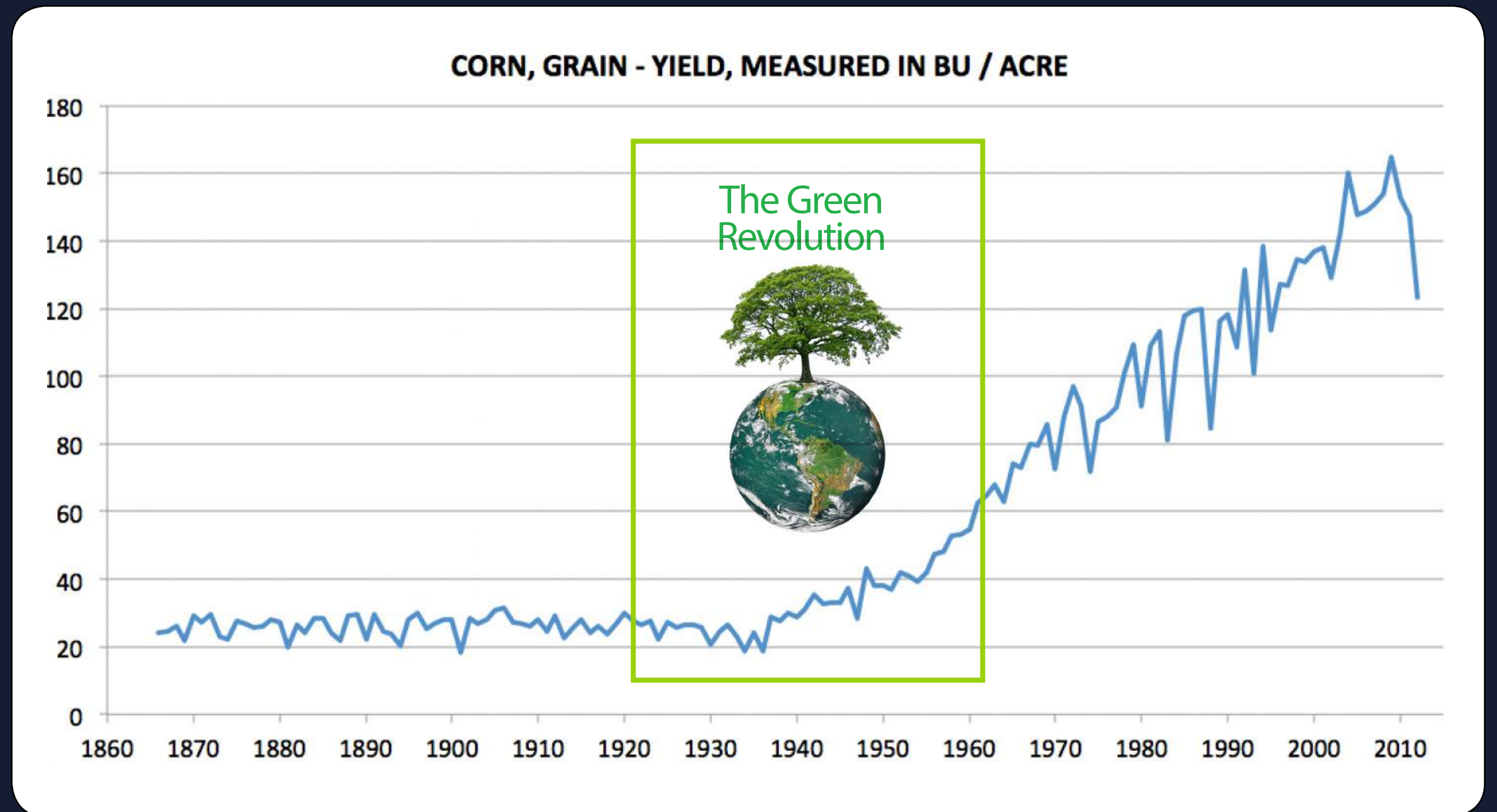


Good
news...

The Green Revolution



Good news...



36.36872 litres = 1 bushel (BU) Stuart Staniford, Ph.D. Adjunct Professor, Computer Science Department - Cornell University

Bad news...

We can't do it that way again
because the low hanging fruit
has already been picked



The Next Green Revolution

The Innovation Revolution

We're well positioned.

- Agriculture to become Australia's next \$100 billion industry by 2030
- 65% of Australian Ag is exported
- In 2014, Australian Ag & food exports totalled \$44.3 billion.
- This equated to 13.6% of the total value of Australia's goods & services exports that year.

AUSTRALIA'S TOP AGRICULTURE, FISHERIES AND FORESTRY (a) EXPORTS 2014

Rank	Commodity (b) (c)	\$ million	% share
1	Beef	7,751	17.5
2	Wheat	5,920	13.4
3	Meat (excl beef)	3,733	8.4
4	Wool & other animal hair (incl tops)	2,417	5.5
5	Cotton	2,008	4.5
6	Wine	1,858	4.2
7	Barley	1,760	4.0
8	Live animals (excl seafood)	1,617	3.7
9	Oil-seeds & oleaginous fruits, soft	1,605	3.6
10	Sugars, molasses & honey	1,592	3.6
11	Milk, cream, whey & yoghurt	1,564	3.5
12	Fruit & nuts	1,166	2.6
13	Animal feed	1,161	2.6
14	Vegetables	1,044	2.4
15	Hides & skins, raw (excl furskins)	1,026	2.3
16	Edible products & preparations	1,016	2.3
17	Crustaceans	933	2.1
18	Wood in chips or particles	840	1.9
19	Cheese & curd	780	1.8
20	Cereal preparations	708	1.6
TOTAL AGRICULTURE, FISHERIES & FORESTRY EXPORTS		44,308	100.0

Supply Chains have 2 major problems

Supply Chains have 2 major problems

(People & Money)

“The most unreliable thing in the world is human relationships”

Jack Ma

CEO & Founder Alibaba



This is your Supply Chain





Supply chain innovation

The background of the slide is a blue world map with a white grid. Various business-related icons are scattered across the map, including a hand with a watch, a document with a pie chart, a calculator, a pen, a hand holding a smartphone, and a hand with a watch. There are also some circular diagrams and lines connecting different parts of the map.

Influence
(Take control)

Efficiency
(Redefine how we deliver)

Intelligence
(Eliminate Assumptions & Inefficiencies)

Customer

Raw Materials

Supplier

Influence

*Vertical Integration vs.
Horizontal Integration*

Influence

Vertical Integration vs. Horizontal Integration

- Vertical Integration
Andrew Carnegie, bought out the suppliers
- Horizontal Integration
John Rockefeller, bought out the suppliers

RESOURCES

Raw materials, fields, forests, and farms



VERTICAL



MANUFACTURING

Production and processing

HORIZONTAL



HORIZONTAL



DISTRIBUTION

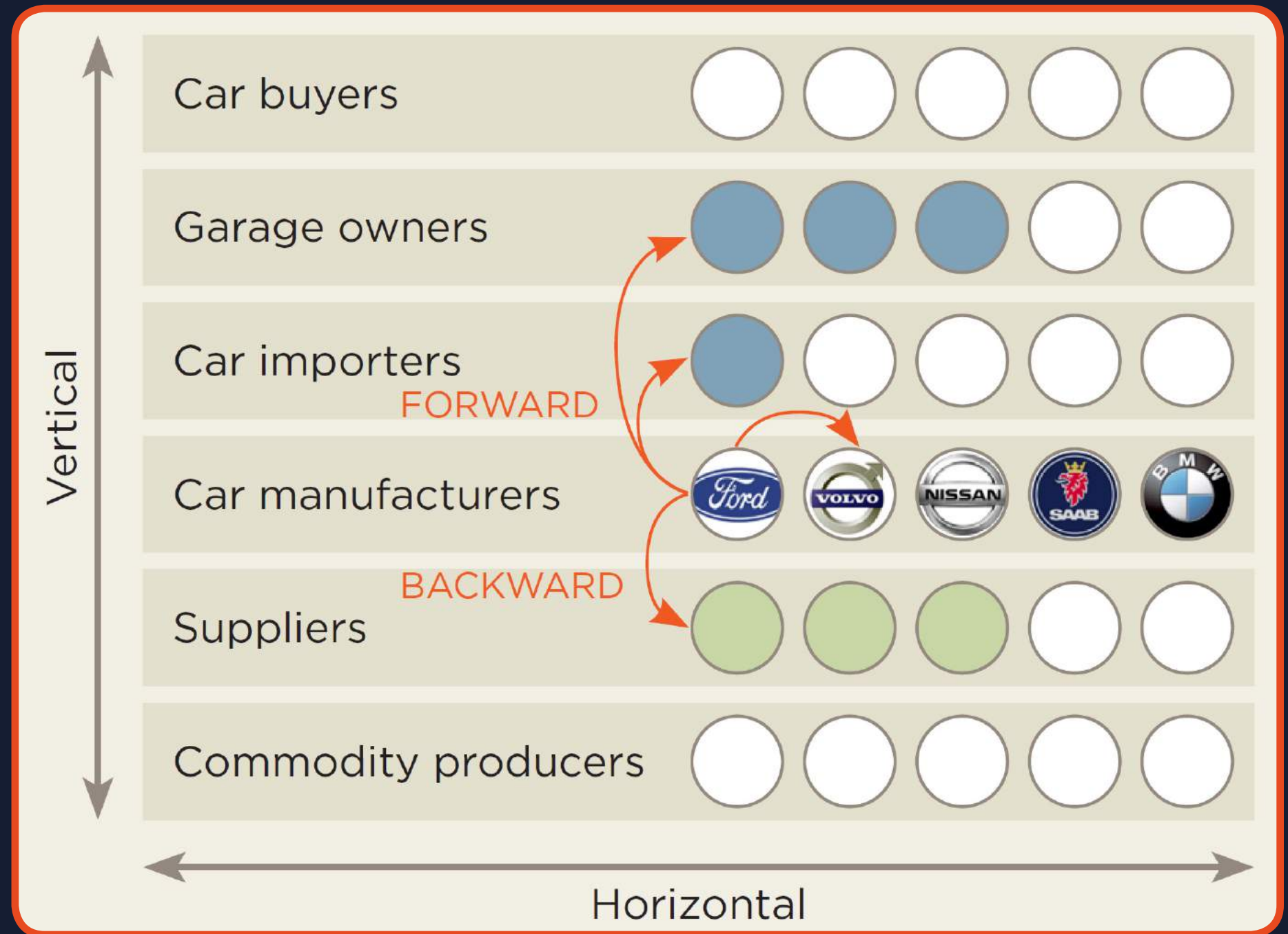
Shipping and transportation, delivery to customers



VERTICAL

Influence

Market/Supply Chain Integration



<http://www.oprules.com/supply-chain-optimization-blog/bid/241648/Vertical-vs-Horizontal-Integration-Which-is-a-Better-Operations-Strategy>

Influence



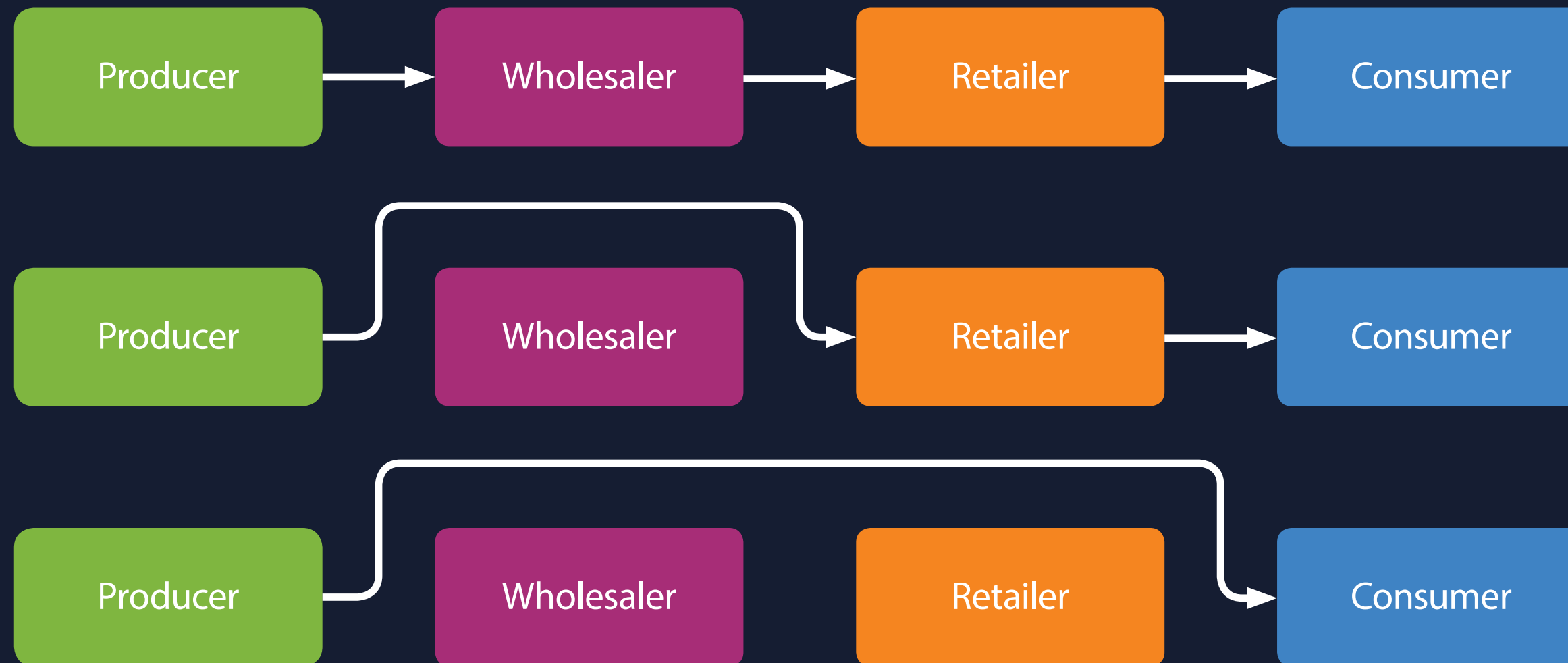
In 2008 the Tesla Roadster production run was built on a Lotus chassis.

In 2017 Tesla have their own sales channel, distribution, service delivery, retail and web sales, chassis design & production, global supercharger network, LI battery Gigafactory and they now own SolarCity which will deliver the power to customers across North America to recharge the vehicles.

Efficiency

Disintermediation

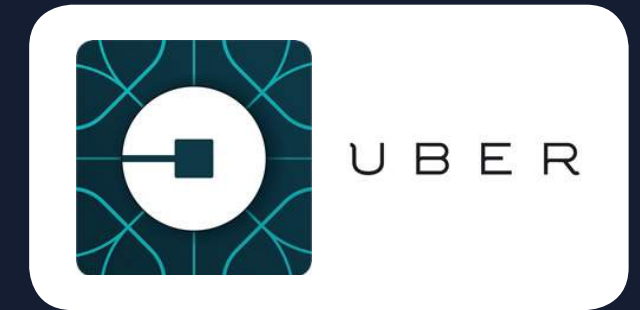
Disintermediation: removal of intermediary steps in a value chain.



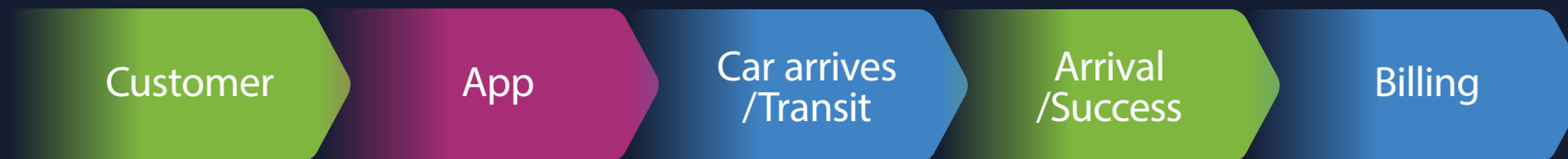
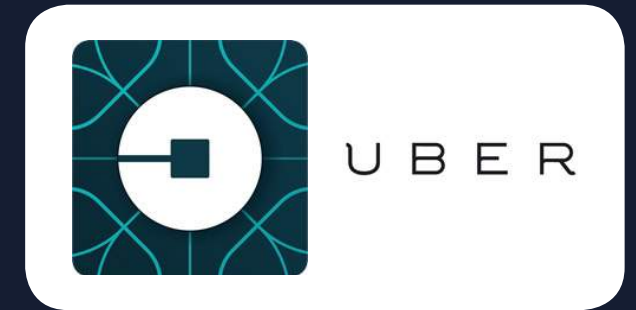
Disintermediation



Disintermediation



Disintermediation



- Transaction
- 3rd parties
- Fees
- Receipt

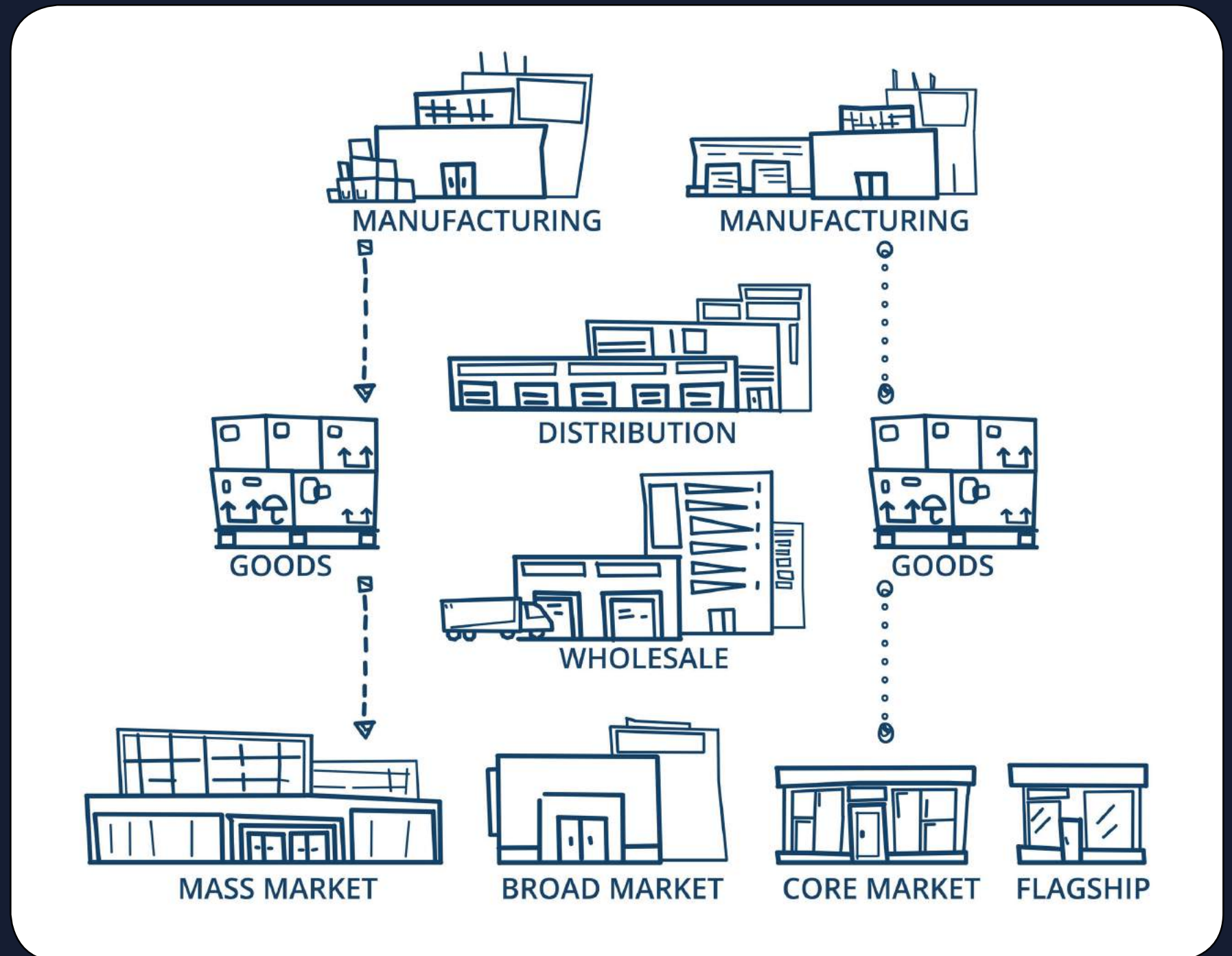


- Trip request

Disintermediation

is about opportunities...

- margin
- speed
- customer experience
- lifetime customer value (LCV)



Efficiency

Producer

Wholesaler

Logistics

Retailer

Consumer

Efficiency



Producer

Wholesaler

Logistics

Retailer

Consumer

Producer

Wholesaler Logistics

Producer

Consumer

Consumer

amazon.com[®]



U B E R

Alibaba.com[®]
Global trade starts here.™

Producer

Wholesaler

Logistics

Retailer

Consumer

Producer

Wholesaler Logistics

Producer

Consumer

Consumer



Grewar Farm Vending

Fresh farm produce available from our VENDING MACHINES for your convenience

At Grewar Farm Vending we bring the food from our local fields to your fork.

The Grewar family are farmers and whole farm contractors based in East Perthshire for over a century, providing produce to well known brands such as Albert Bartlett and Scotty Brand.

Visit one of our easy to operate vending machines located across Tayside and beat the Christmas and New Year grocery queues - knowing that you'll be getting the best locally grown produce.

"The machine is another feather in the cap for the city, coming days after it was named a Unesco City of Design."

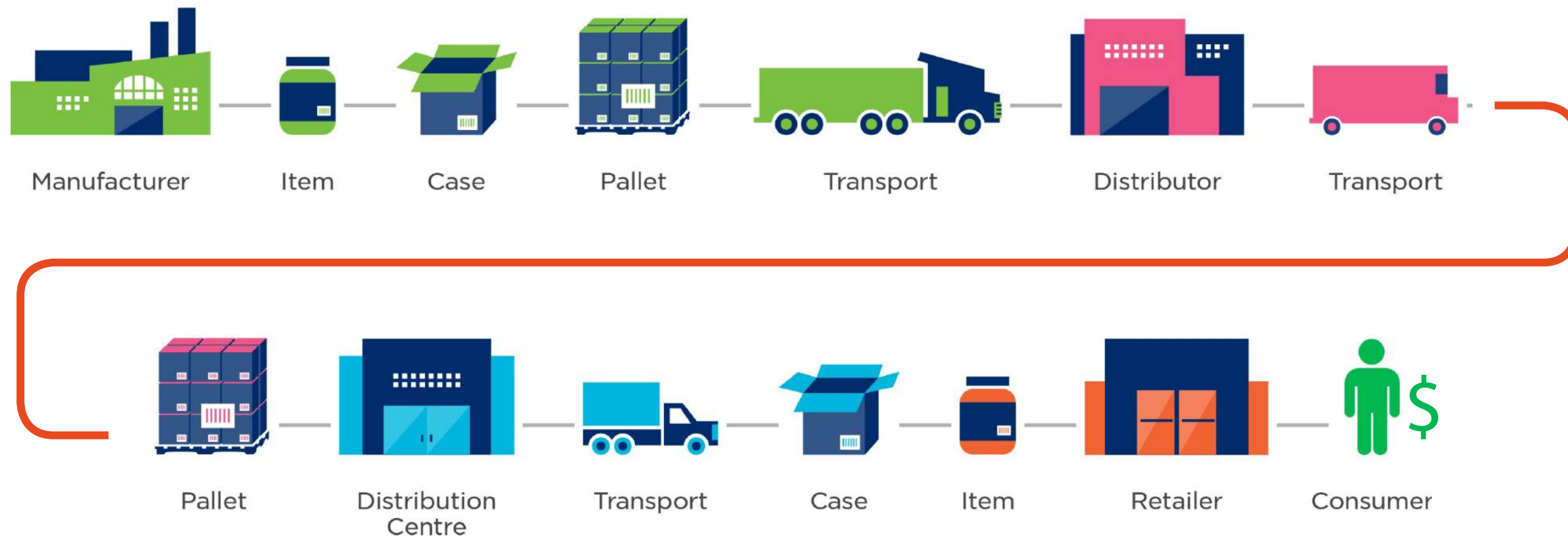


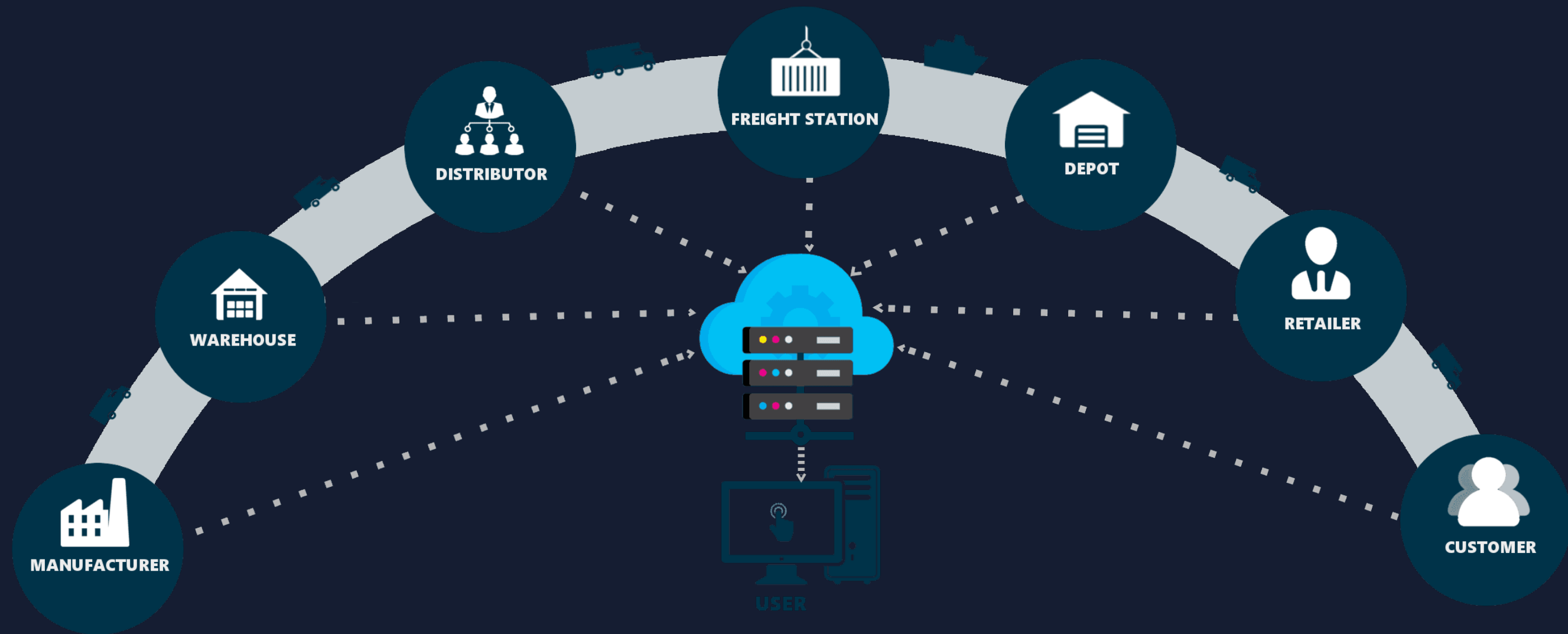
Connection

Data - Record, Monitor, Store, Analyse and Inform

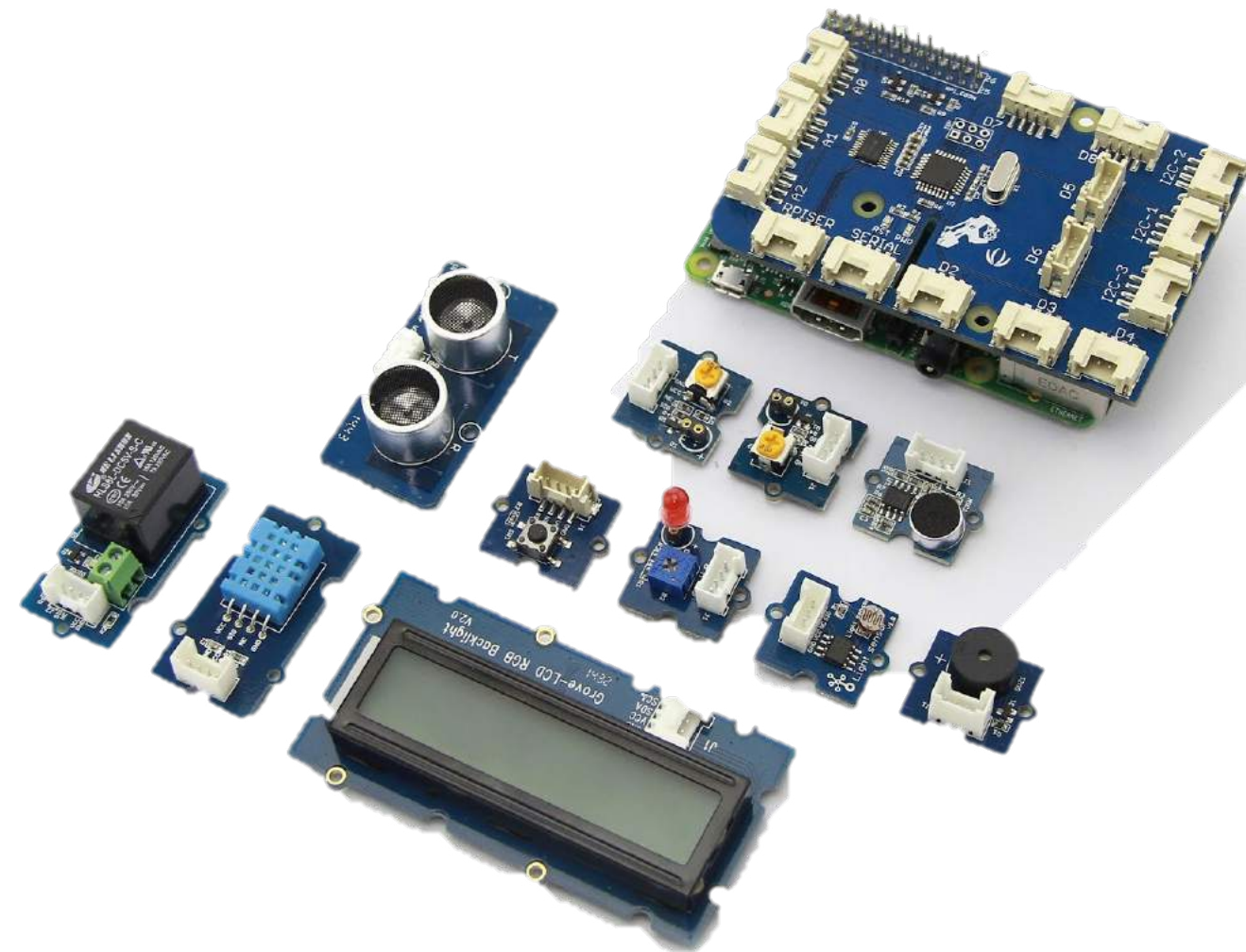
Metrics that Matter

Improving Forecast Accuracy





\$13 trillion or 15% of the World GDP is spent on logistics



Real-time insights
& analysis

Efficiency & process
optimisation

Operational process
modelling

Automated decision
making

Pattern recognition

Predictive maintenance

Machine learning

Artificial intelligence



BIG DATA gas availability project



Supply chain innovation

The background of the slide is a blue world map with a white grid. Various business-related icons are scattered across the map, including a hand with a watch, a document with a pie chart, a calculator, a pen, a hand holding a smartphone, and a hand holding a pen. There are also some circular diagrams with labels like 'Raw Materials', 'Supplier', and 'Customer'. The three orange boxes are arranged horizontally across the middle of the slide.

Influence
(Take control)

Efficiency
(Redefine how we deliver)

Intelligence
(Eliminate Assumptions & Inefficiencies)

The Innovative Supply Chain that will Feed the World

Brett Wiskar
Commercial Technology Director - Wiley
www.wiley.com.au/futurefoodBNE/