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Scrum: Incubator for Innovation

"Innovation is what agile is all about."
Embracing Agile. Harvard Business Review, May 2016
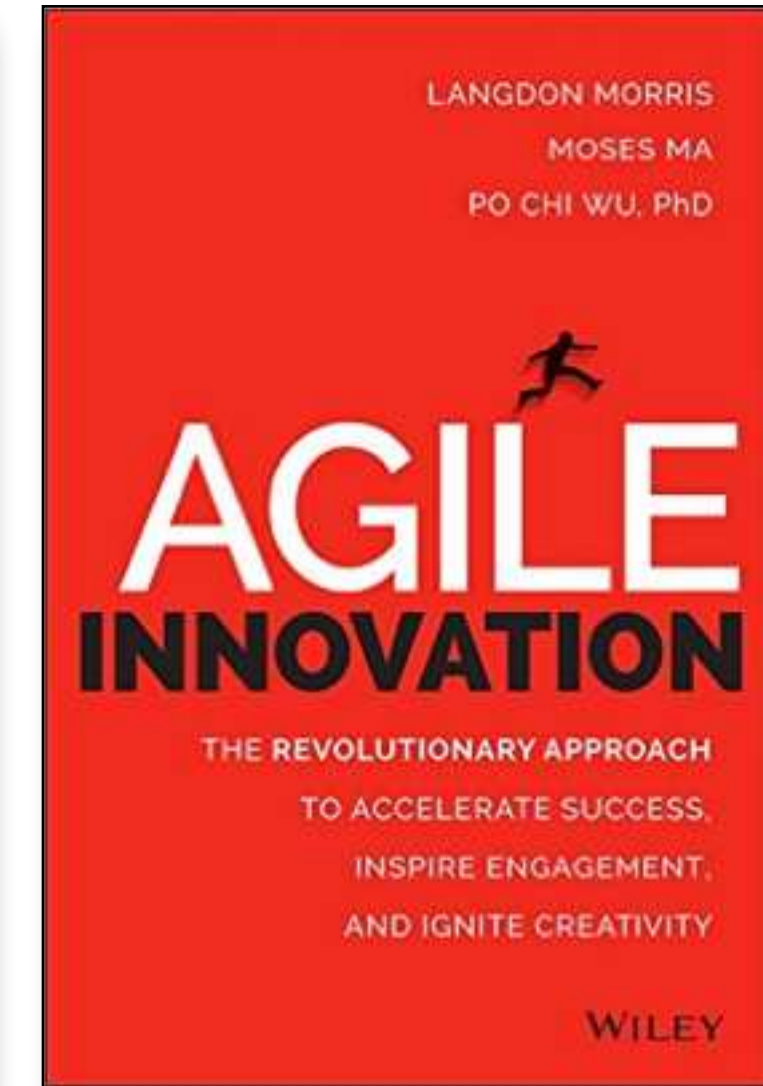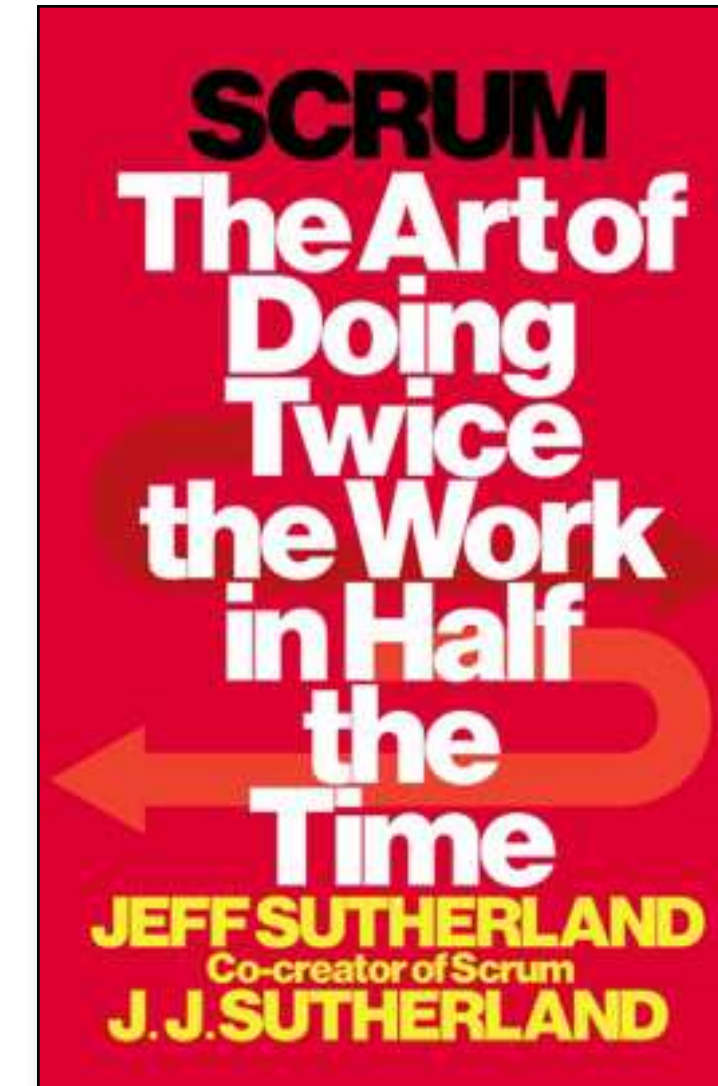
About Jeff and Moses

Jeff Sutherland
- The inventor and co-creator of Scrum, CTO of eleven different software companies, author of *Scrum: The Art of Doing Twice the Work in Half the Time.*

Moses Ma
- The inventor of the Agile Innovation process, partner at FutureLab Consulting, inventor of internet gaming and e-commerce technologies, and co-author of *Agile Innovation.*

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The world's leading authority on Scrum, which has helped hundreds of companies re-shape themselves to face a changing world, increase productivity, and drive profound growth.

FUTURELAB

FutureLab helps bring your organization to mastery of innovation by providing you with the tools to address the core elements of innovation, uncertainty, ambiguity, creativity, and possibility.

SCRUM
The Art of Doing Twice the Work in Half the Time
JEFF SUTHERLAND
Co-creator of Scrum
J.J. SUTHERLAND

LANGDON MORRIS
MOSES MA
PO CHI WU, PhD
AGILE INNOVATION
THE REVOLUTIONARY APPROACH TO ACCELERATE SUCCESS, INSPIRE ENGAGEMENT, AND IGNITE CREATIVITY
WILEY

Harvard Business Review

INNOVATION
Embracing Agile
by Darrell K. Rigby, Jeff Sutherland, and Hirotaka Takeuchi
FROM THE MAY 2016 ISSUE

Embracing Agile Innovation

Harvard Business Review

INNOVATION

Embracing Agile

by Darrell K. Rigby, Jeff Sutherland, and Hirotaka Takeuchi

FROM THE MAY 2016 ISSUE

Agile innovation methods have revolutionized information technology. Over the past 25 to 30 years they have greatly increased success rates in software development, improved quality and speed to market, and boosted the motivation and productivity of IT teams.

These are the Questions

- How do you build an innovation process that sticks?

- How do you train an innovation skillset that can actually move the needle?

- How do you overcome corporate anti-bodies to change?

- How do you build an innovation management system that really works?
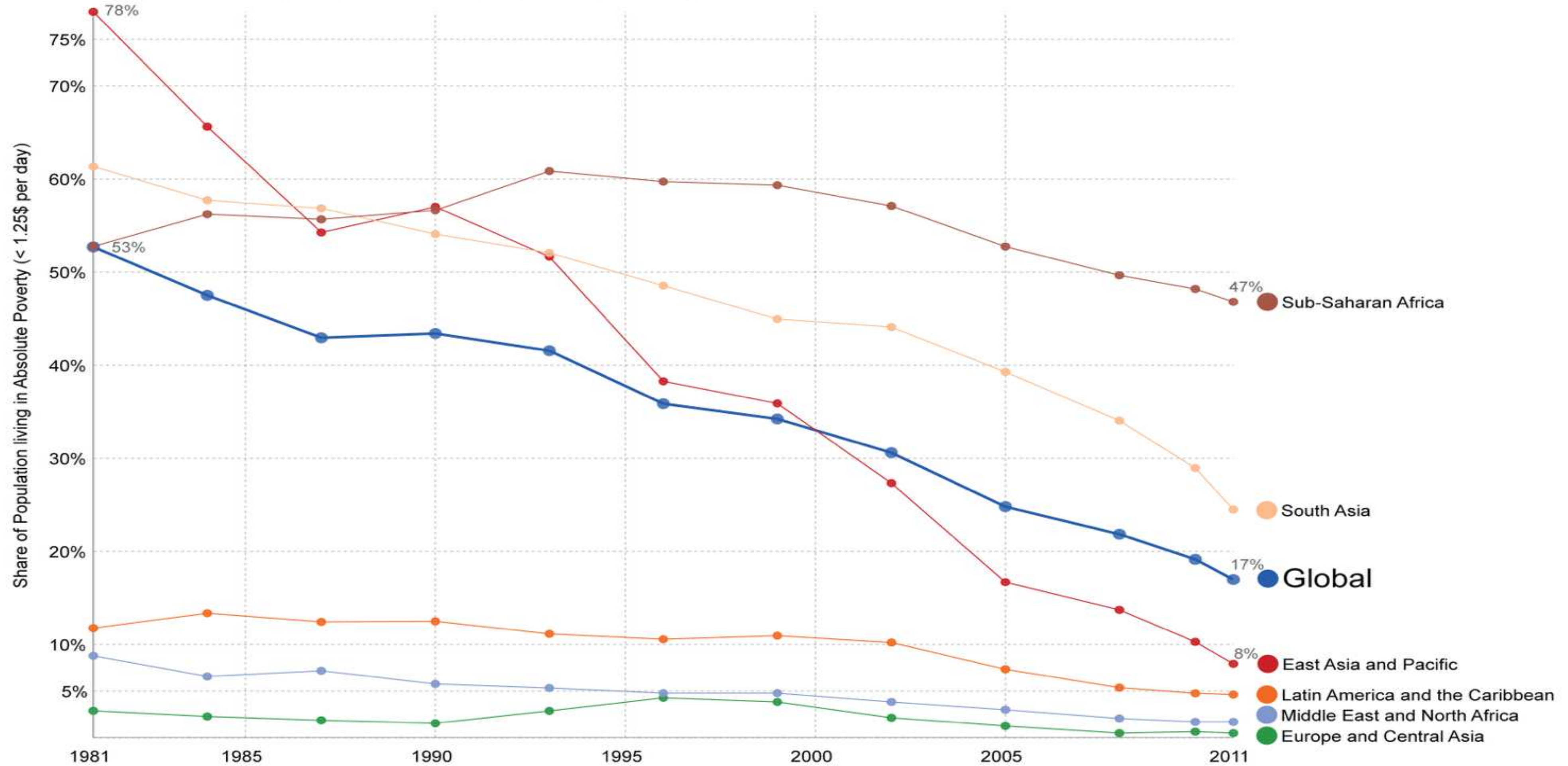
AGILE
+ INNOVATION
IS THE ANSWER

Something Wonderful Is Happening

Global innovation is driving poverty reduction

Share living in Absolute Poverty by World Region (1981-2011) – by Max Roser

The absolute poverty is defined as living with less than $1.25/day. This is measured by adjusting for price changes over time and for price differences between countries (PPP adjustment).

Our World in Data

Y-axis: Share of Population living in Absolute Poverty (< 1.25$ per day)

- 78%
- 53%
- 47% Sub-Saharan Africa
- South Asia
- 17% Global
- 8% East Asia and Pacific
- Latin America and the Caribbean
- Middle East and North Africa
- Europe and Central Asia
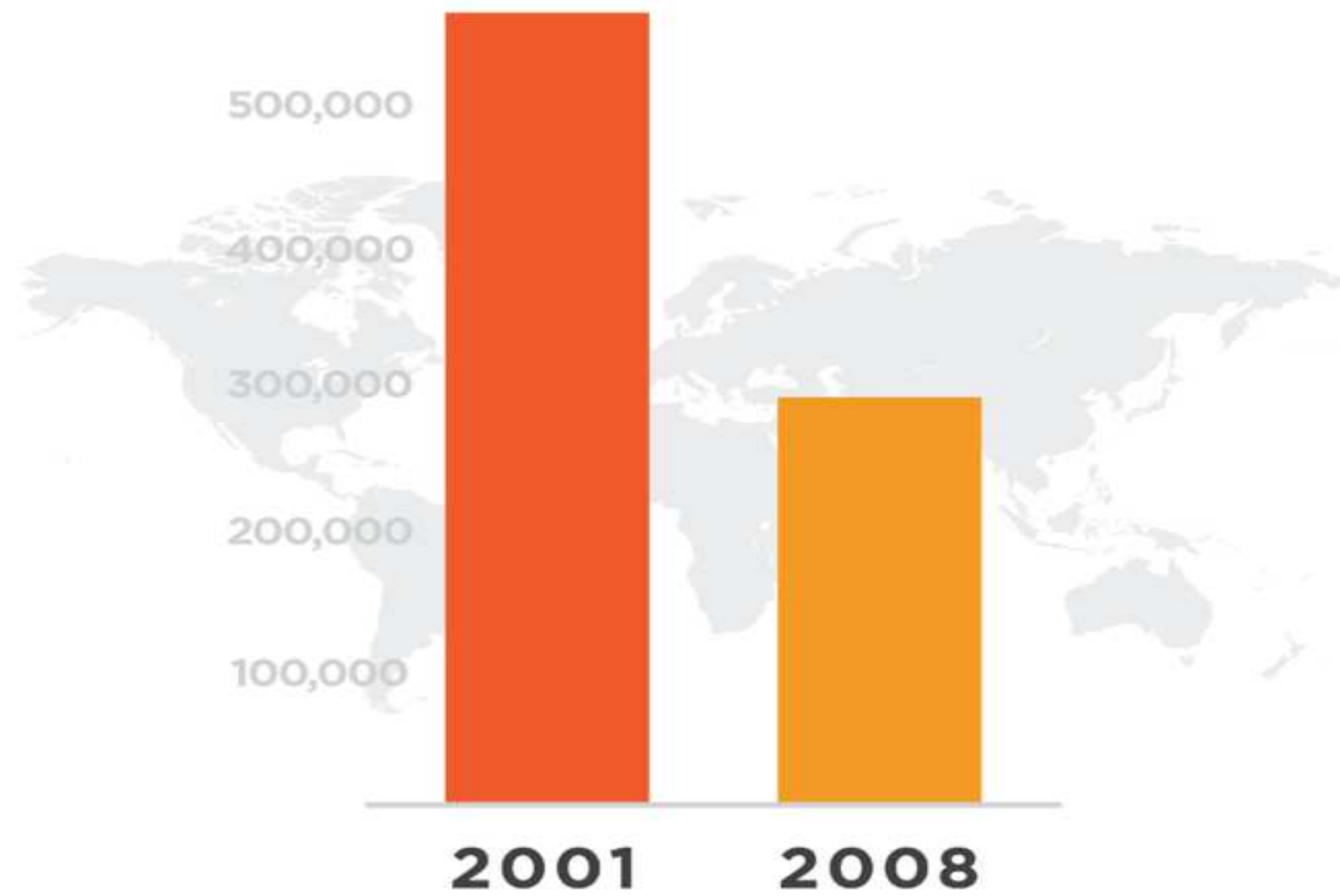
X-axis: 1981, 1985, 1990, 1995, 2000, 2005, 2011

Data source: World Bank (PovcalNet)

The interactive data visualisation is available at OurWorldinData.org. There you find the raw data and more visualisations on this topic.
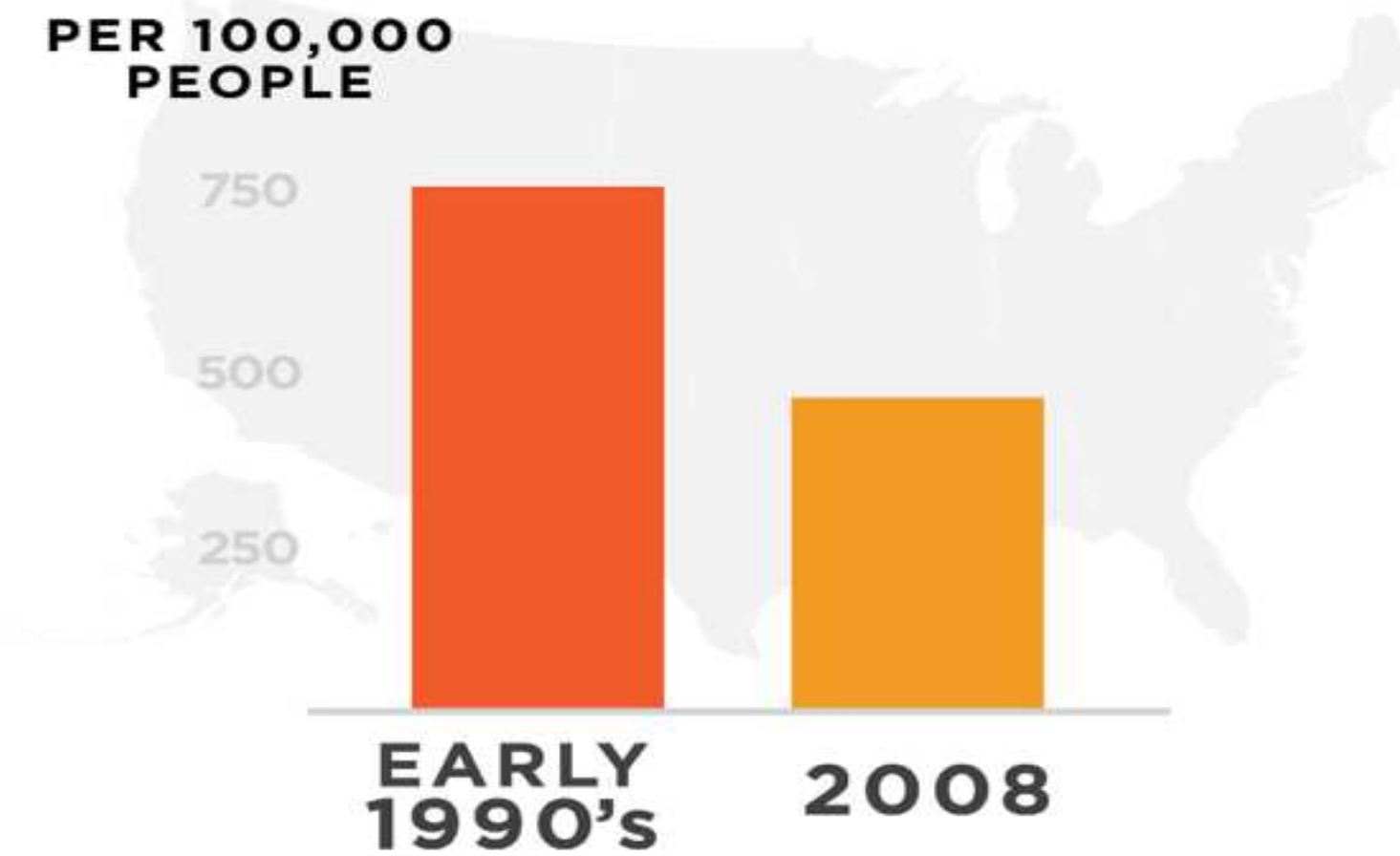
Licensed under CC-BY-NC-SA by the author Max Roser.

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War is dying

World-wide battle deaths per 100,000 people
■ Colonial ■ Interstate ■ Civil ■ Civil with foreign interaction
Human Security Report Project, Uppsala Conflict Data Project, Peace Resarch Institute of Oslo, via Stephen Pinker & WSJ

VIOLENT CRIMES ARE ON THE DECLINE

MURDERS WORLDWIDE

500,000
400,000
300,000
200,000
100,000

2001   2008

VIOLENT CRIME RATE, U.S.

PER 100,000 PEOPLE

750
500
250

EARLY 1990's   2008

Literacy is increasing

Literacy Rates around the World from the 15th century to now – Max Roser
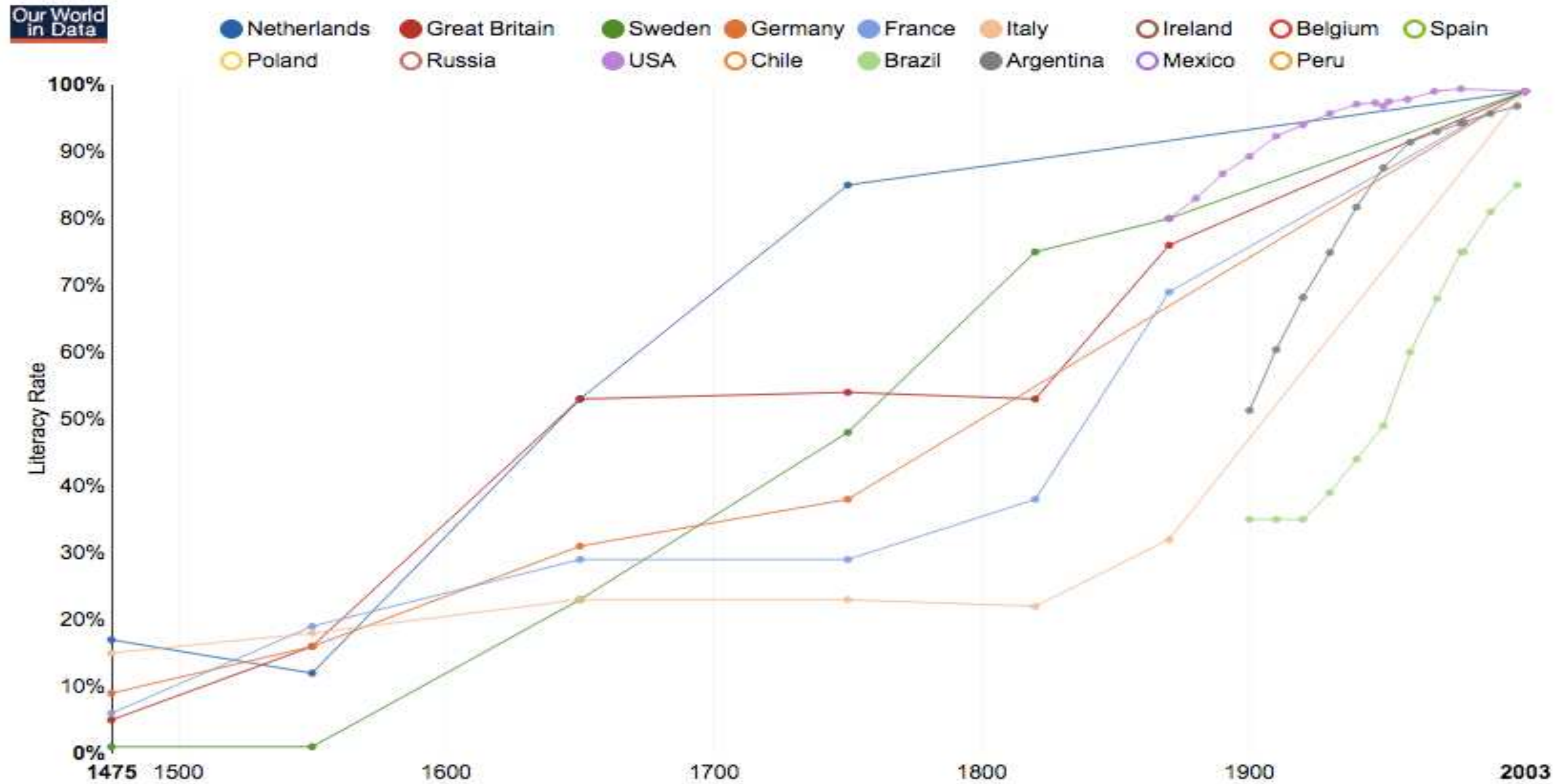
Legend: Netherlands, Great Britain, Sweden, Germany, France, Italy, Ireland, Belgium, Spain, Poland, Russia, USA, Chile, Brazil, Argentina, Mexico, Peru

The author Max Roser licensed this visualisation under a CC BY-SA license. You are welcome to share but please refer to its source where you find more information: www.ourworldindata.org/data/education-knowledge/literacy
Data Sources: Buringh & Van Zanden (2009), OxLAD, Broadberry & O'Rourke (2010), CIA and US National Center for Education Statistics.

Why is this Happening?

drivers of the information revolution

Digital Power =

Computing   **X**   **Communication**   **X**   **Storage**   **X**   **Content**

| Growth Rate = Doubles Every 18 months | Growth Rate = Doubles Every 9 months | Growth Rate = Doubles Every 12 months | Growth Rate = Not N^2 but 2^N |

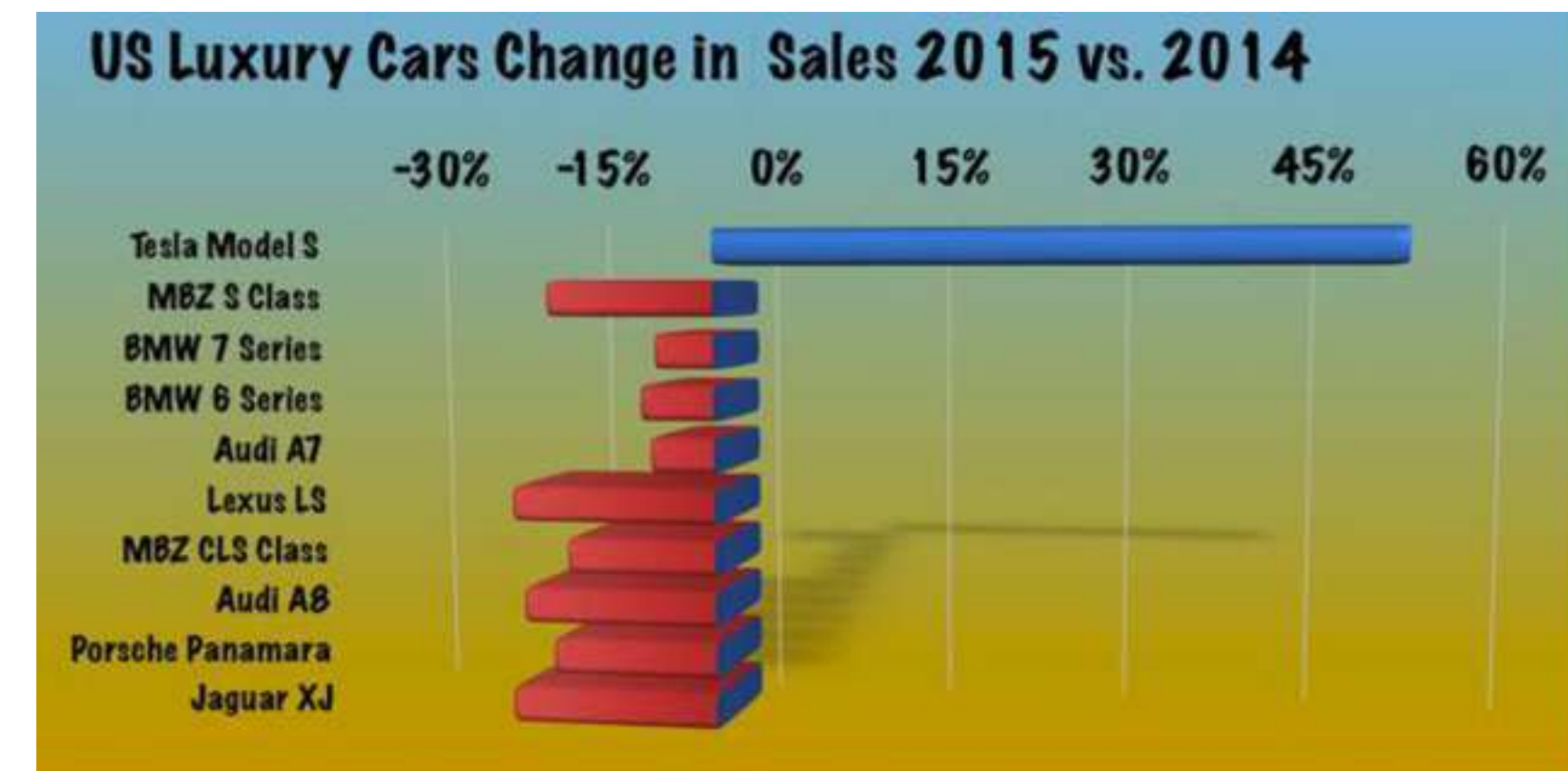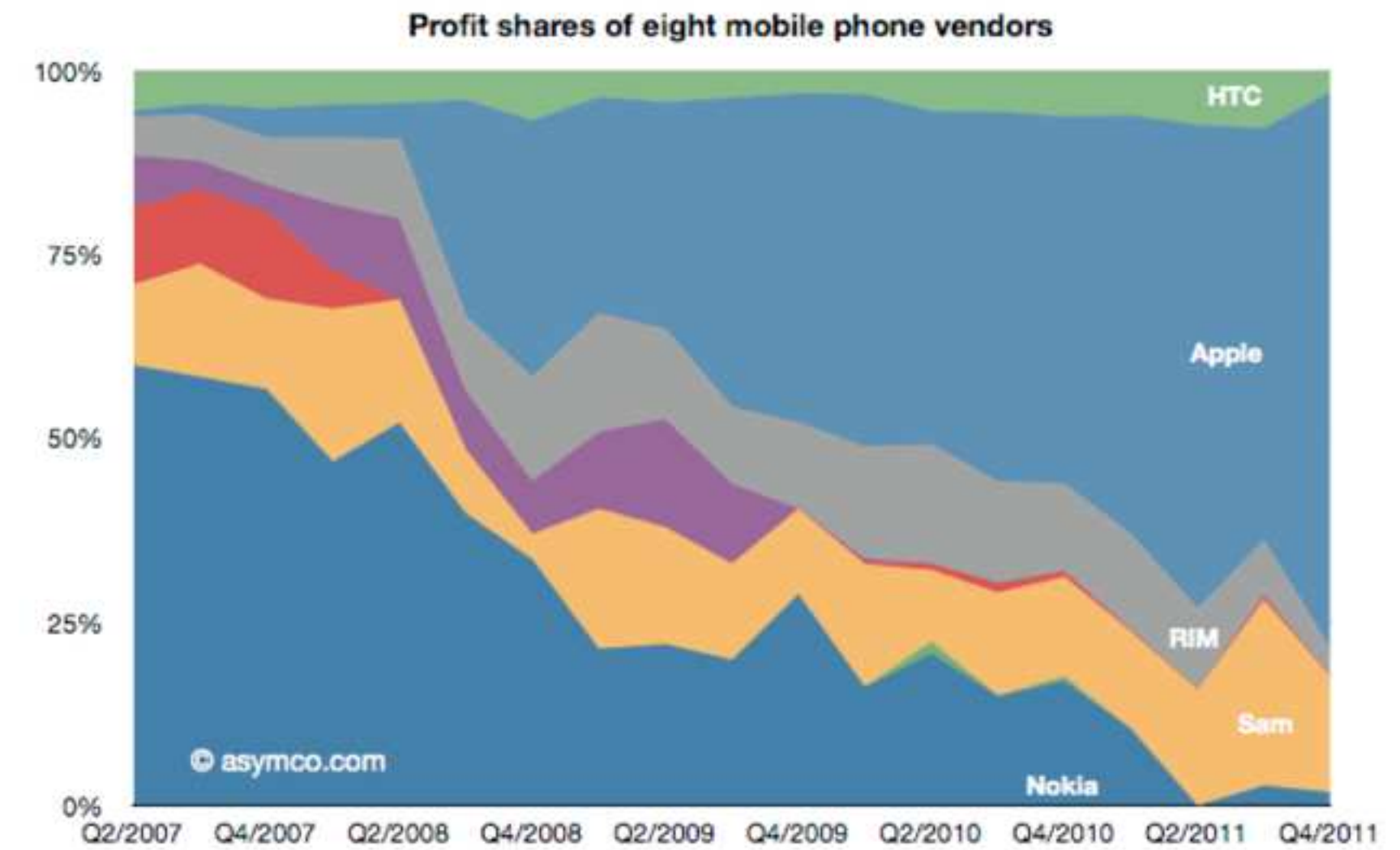**An exponential rate of growth that reduces computing and networking costs 95-97% every ten years**
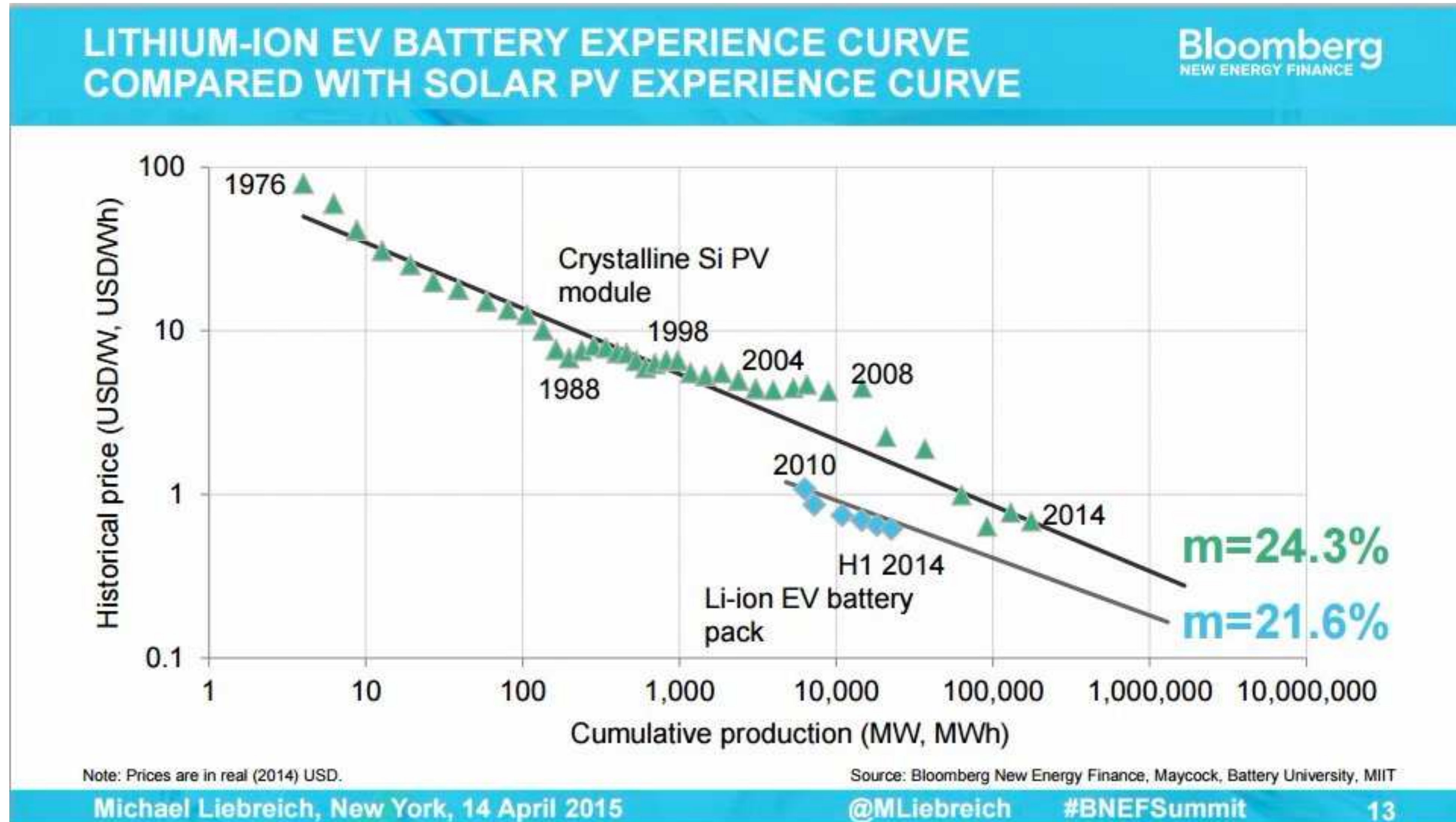
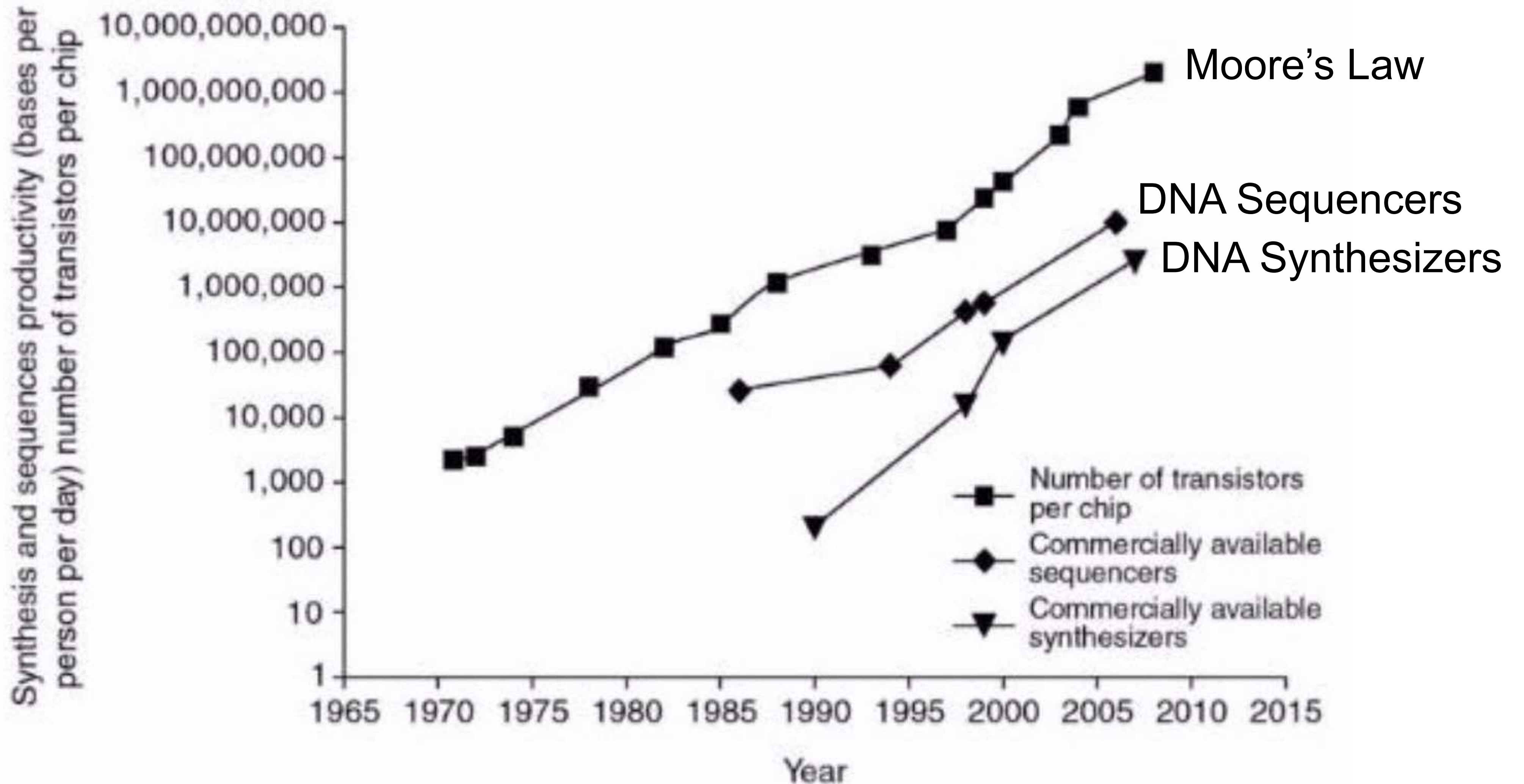# digital power is driving a manufacturing revolution

Customers loved this…

…Until they tried this…

Profit shares of eight mobile phone vendors

US Luxury Cars Change in Sales 2015 vs. 2014

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digital power is driving an energy revolution

LITHIUM-ION EV BATTERY EXPERIENCE CURVE COMPARED WITH SOLAR PV EXPERIENCE CURVE

Bloomberg NEW ENERGY FINANCE

Crystalline Si PV module

m=24.3%
m=21.6%

H1 2014 Li-ion EV battery pack

Note: Prices are in real (2014) USD.

Source: Bloomberg New Energy Finance, Maycock, Battery University, MIIT

Michael Liebreich, New York, 14 April 2015   @MLiebreich   #BNEFSummit   13

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digital power is driving a biology revolution

Carlson, Robert (2011) Biology is Technology. Harvard University Press.

Humanity is doing twice the work

Global productivity increasing

Global Productivity

Productivity:
Output per hour

Median Family
Real Income
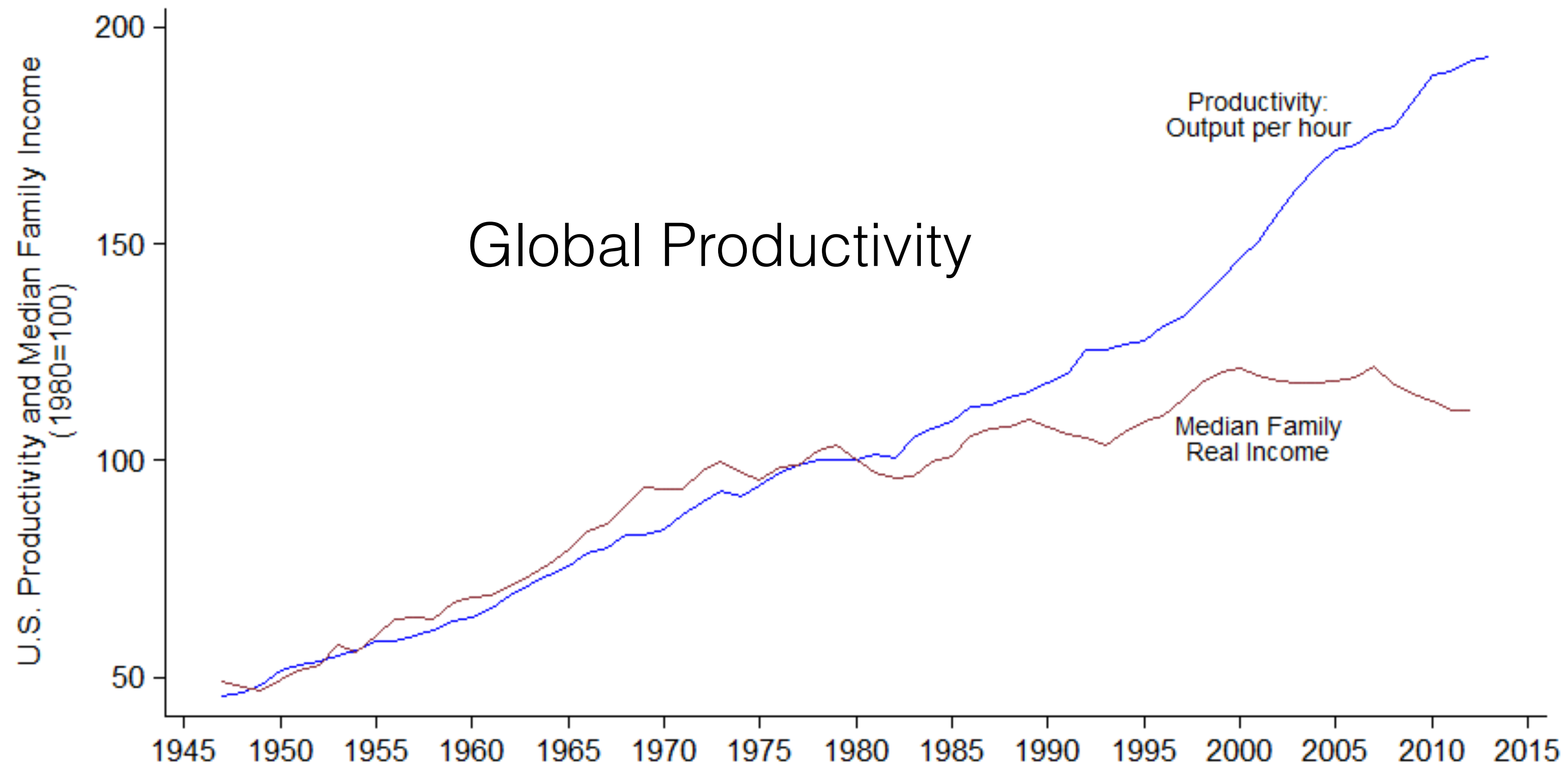
houseofdebtblog.org, @profsufi & @AtifRMian, Data source: BLS, CPS

In half the time
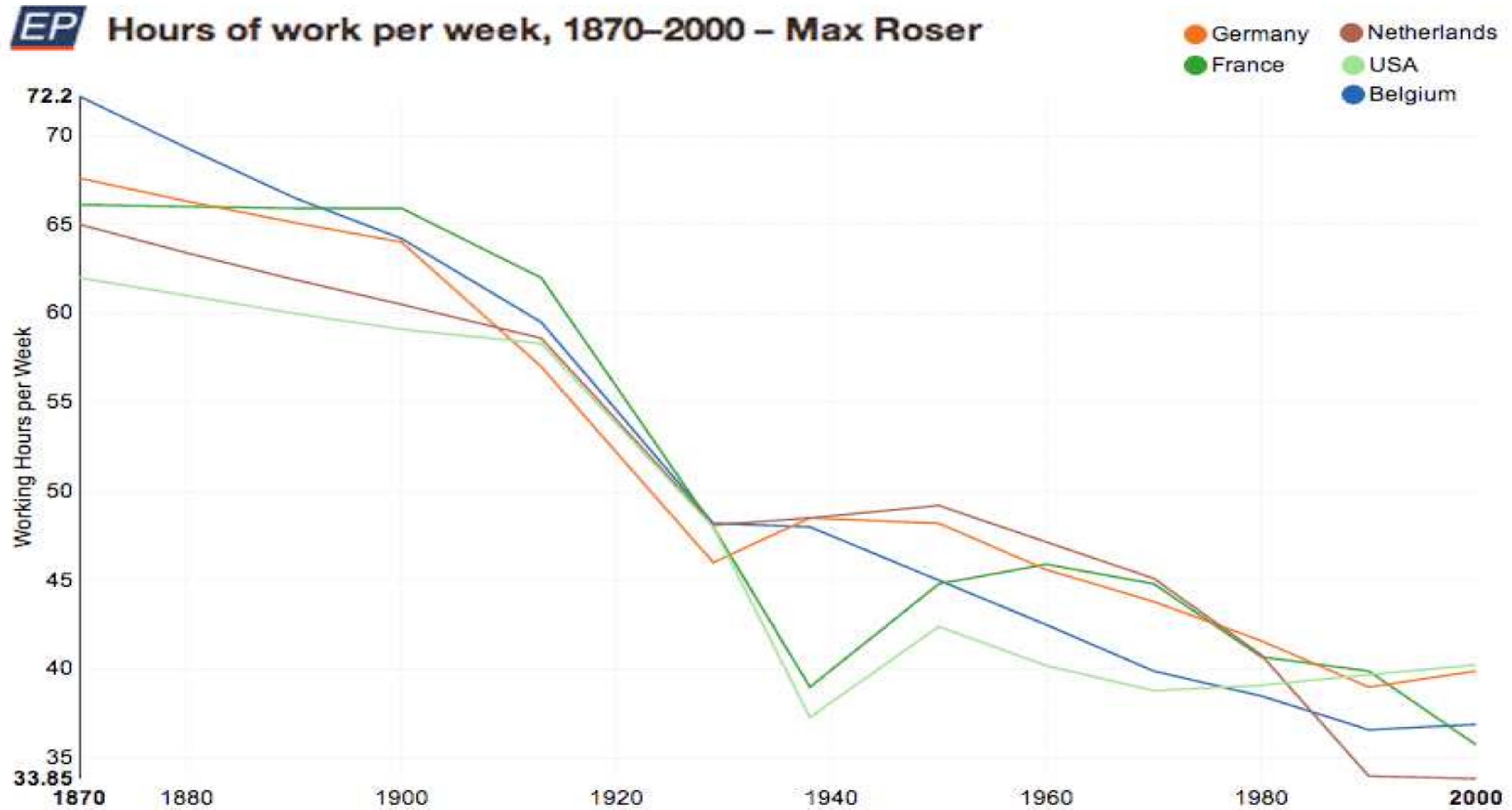
Hours of work per week, 1870–2000 – Max Roser

Legend: Germany, Netherlands, France, USA, Belgium

The author Max Roser licensed this visualisation under a CC BY-SA license. You are welcome to share but please refer to its source where you find more information: www.explainingprogress.com/data/economic-development-work-standard-of-living/working-hours
Data Source: Hubermann & Minns (2007)

BECOMING MORE AGILE

and Innovative is part of the Human Condition

AGILE INNOVATION

Cool Scrum Innovation Styles

- Global innovations centers in one of world's largest hardware companies - see previous online course in ScrumLab
- Implement Aggressive Scrum
- Use Design Sprints
- Johns Hopkins Applied Physics Laboratory
- King Games - one of the most awesome and profitable innovation teams ever
- Organize your entire innovation portfolio with Scrum for Ideas and FutureLab's toolkit

Aggressive Scrum Team

Mach Speed Team Velocity

Source: Stephen C. Daukas
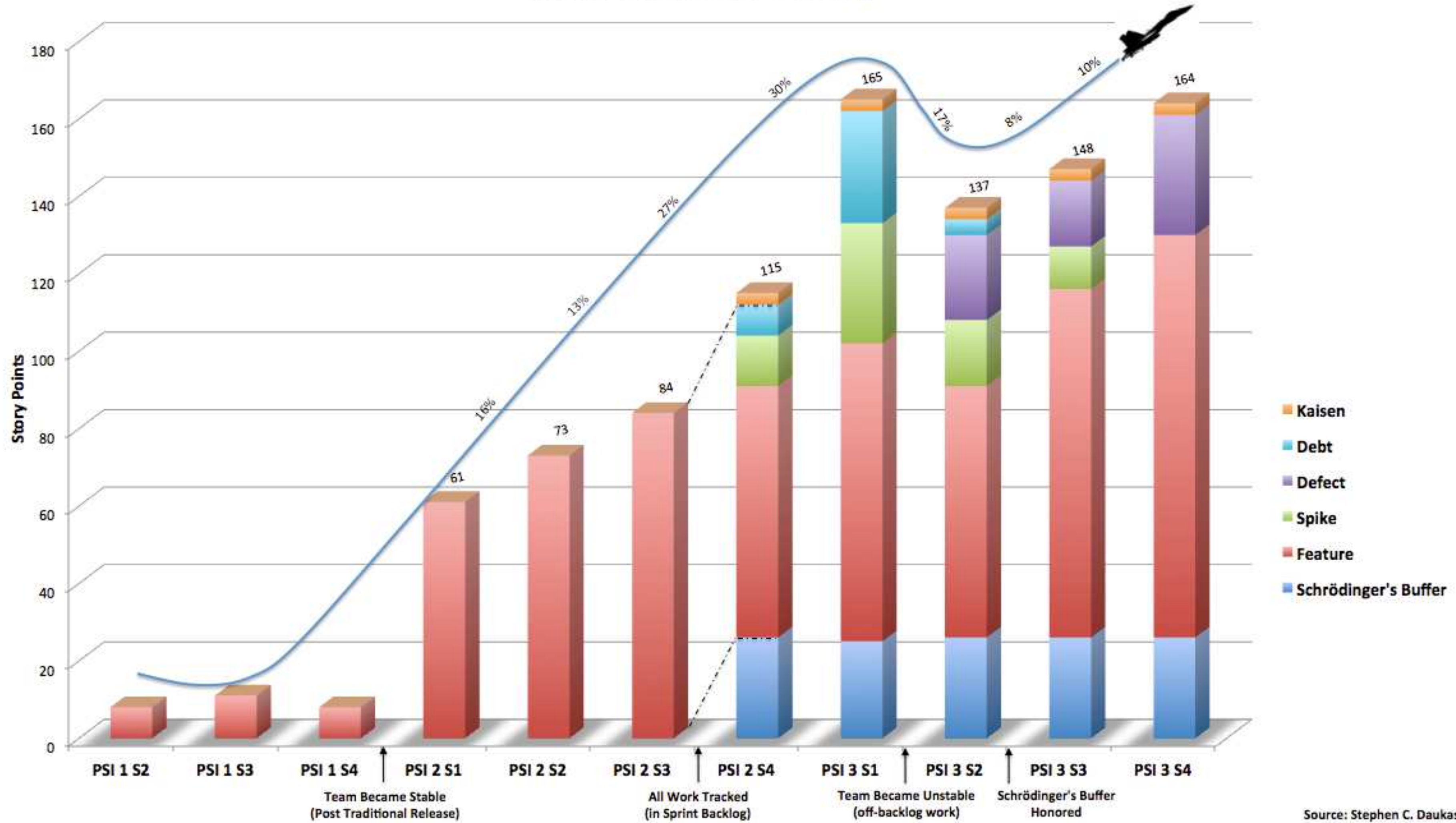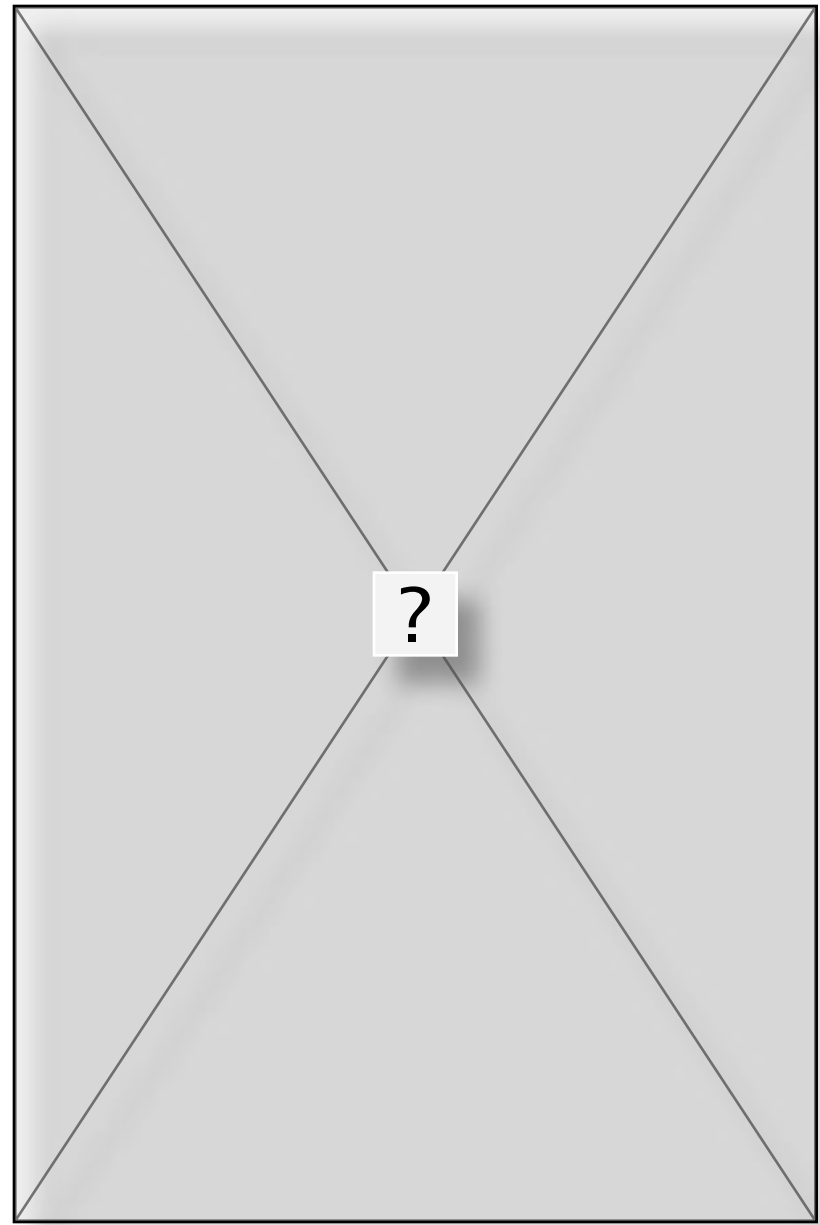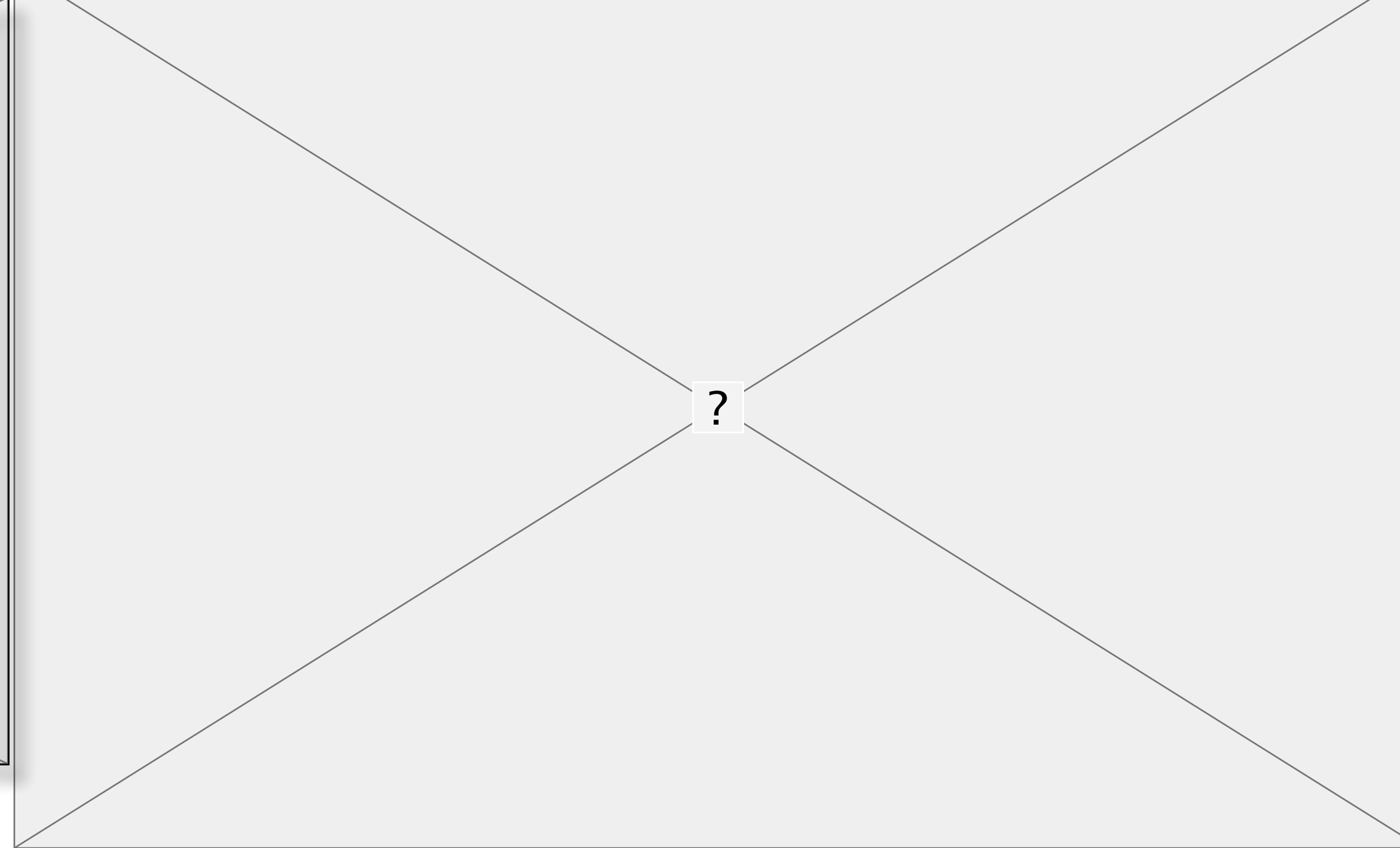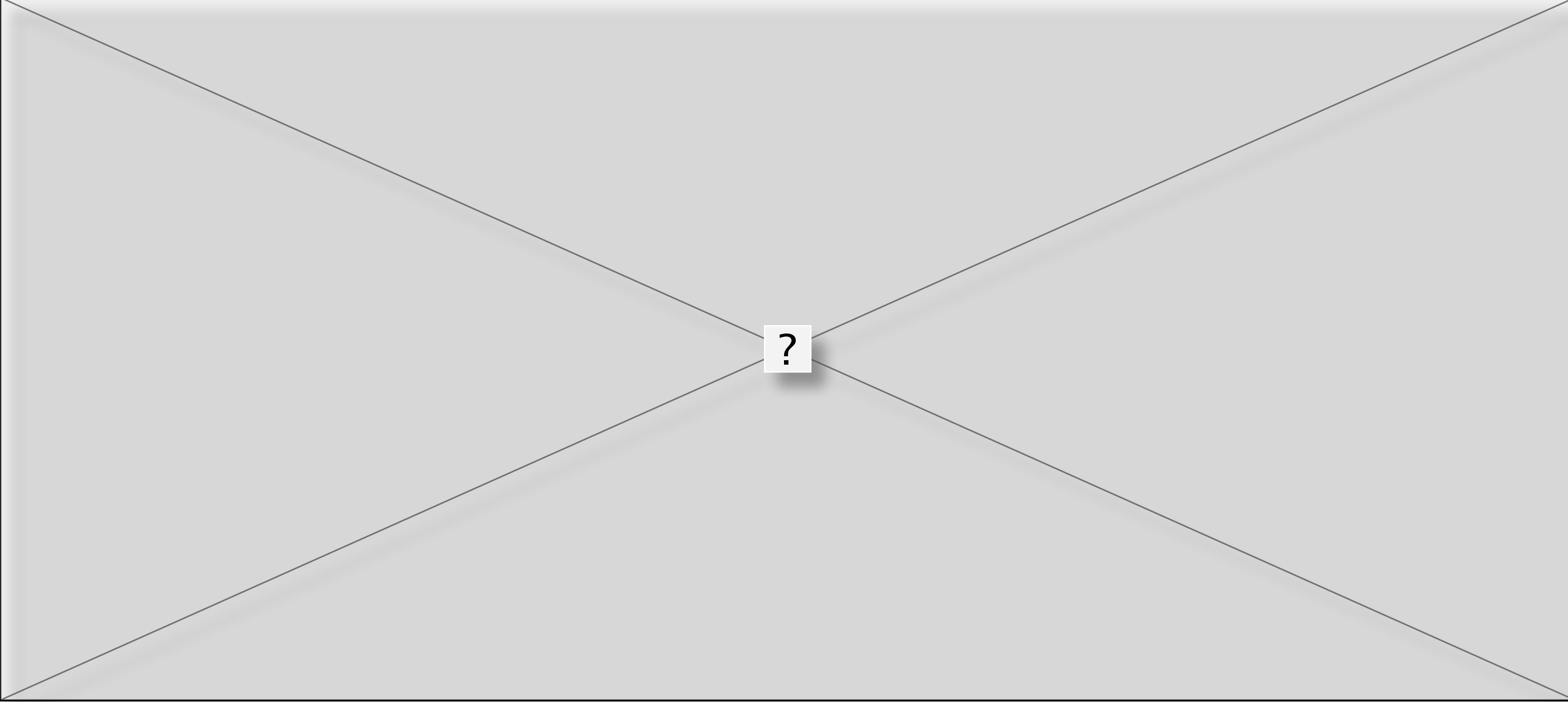
labs.openview.com

- Get $100M from the government to solve a problem
- Develop a dozen or more strategies for implementation
- Create a map of research stories
- Time box every story and burn them down in sprints
- Trim the tree until the best solution is achieved
- Scrum provides better solutions twice as fast

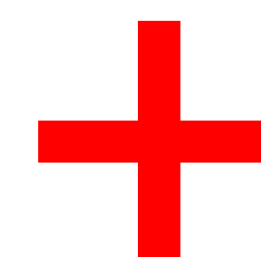# Candy Crush May Be the Most Profitable Game in the World

100 million real time online users
70 big data analysts dedicated to 70 Scrum teams

- Two week sprint to go live with online prototype
- One day sprints for two weeks to optimize game
  - Daily big data analysis and game tuning
- Profit or die within 4 weeks!

INNOVATION INHIBITORS

1. Without a comprehensive and systematic approach to innovation, you simply won't be able to move the needle. Contests, hackathons and design sprints are good… but they're like trying to lose weight with the latest diet, they cannot effect lasting and transformative change. No one can do your push ups for you.

2. Innovation white blood cells will seek to "defend" the enterprise, and must be included as active participants in the IdeaScrum process.

3. Cargo cult innovation and AINO

There is no "off the shelf" innovation product that can address the specific culture and unique challenges/success factors of your company. You need to carefully develop an *innovation prescription* that works for you.
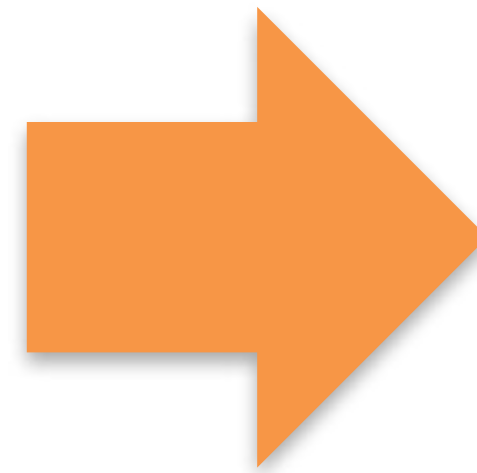
Agile   # Innovation   # Agile Innovation
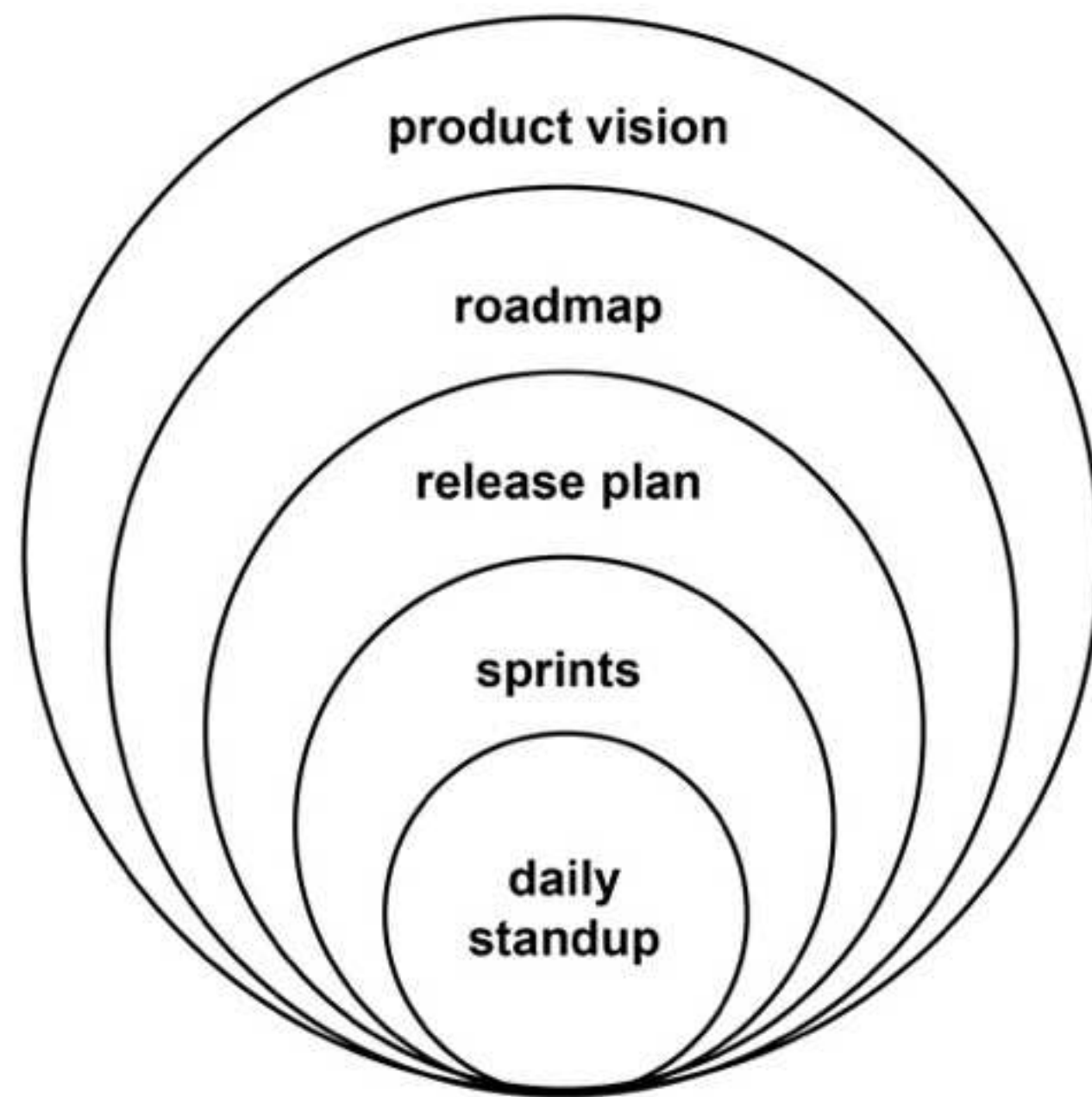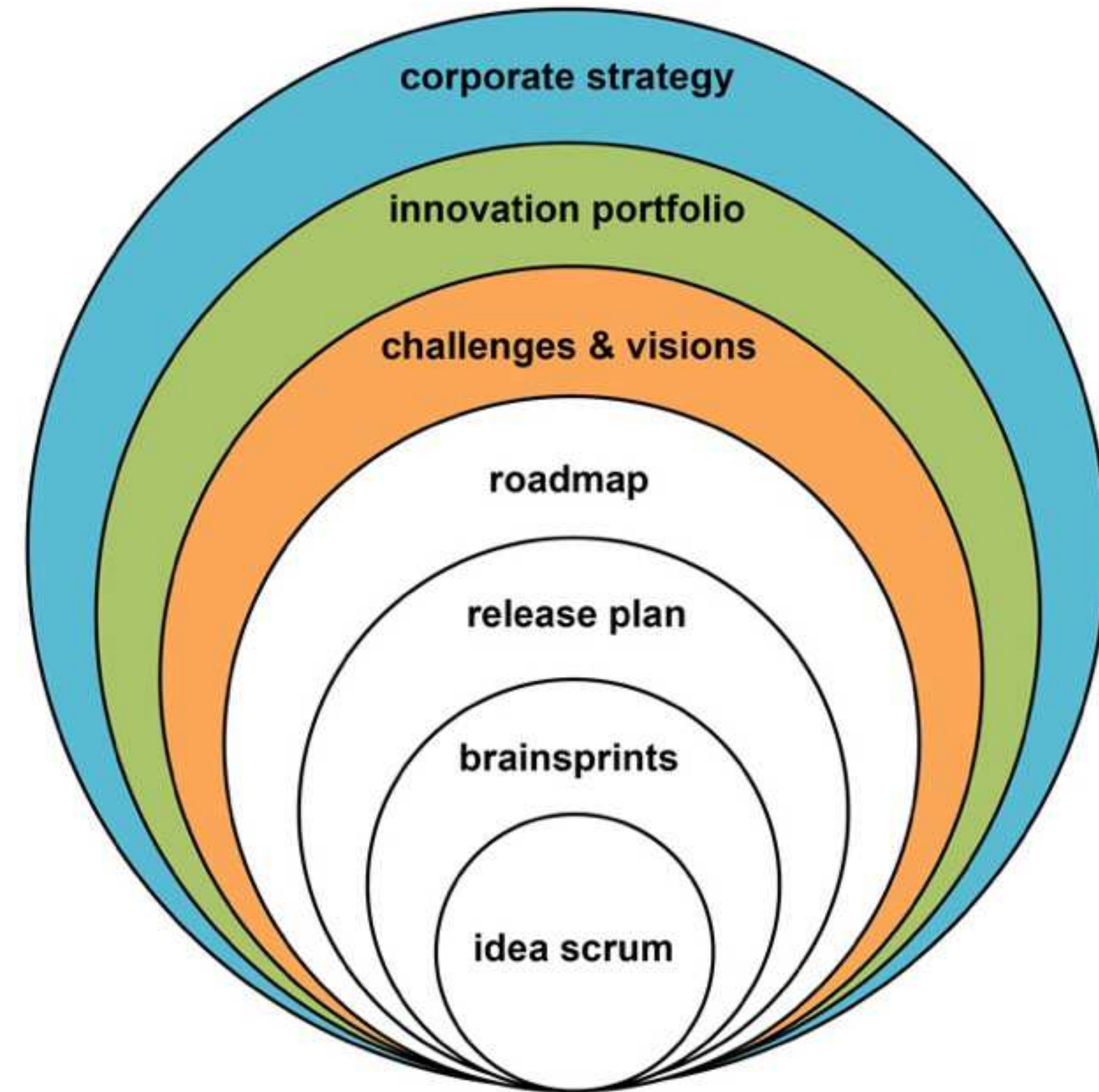
Innovation Scrum

Agile model

Agile Innovation model

Our Way to do Scrum for Ideas

Multivisioning Perspectives
- Core
- Reframe
- Team
- Custom

IDEASCRUM PROCESS

Converge: Fibonacci-based Multi-voting

Prototype: MVP, POC, etc

Social Workflow Drives Progress

Diverge: Iterative Brainsprints

Validate: Incrementally Complete "Working Innovations"

ITERATIVE RELEASES

Understand: Unpack

Innospective

IDEA BACKLOG

- Advancement to scrum
- Assign scrum team lead
- Scrum team formation
- Initial ethnography
- Brainsprint configurator
- Stakeholder buy-in
- This is the BIG DIG

SCRUM ROLES
- Scrum lead
- Scrum team members
- Stakeholders
- Users
- Product owner

F U T U R E L A B
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The Problem

How to move the needle

Margot Golding, formerly EVP Wholesale Loan Servicing Wells Fargo…

"We wanted to ramp up innovation in a group that was considered by some to be 'one of the less innovative' in the company, with no expectation that things would change in any substantive way, since improvements were thought to have been 'wrung out' of the system over the previous decades."

HERE'S THE SOLUTION

OSi The Operating System for Innovation

FutureLab Process:

- Detailed ethnographic assessment
- Intensive six week innovation training
- Dedicated Thinkspot brainstorming rooms
- New ideation software tool – configured to rewrite that group's cultural DNA

The Result: –400 people produced 700 ideas within 6 months, out-performing the "more innovative" groups by a factor of 10x.

Here's Our Solution

OS/i

- **OS/i** *is the* **Operating System for Innovation**

- Leverages machine learning & computation linguistics to simplify the idea harvesting process

- Leverages "social workflow" to track collaboration efforts via lightweight Agile

- System is fully open to empower collaboration at a higher level

- It's how we put the "Agile" in Agile Innovation

- Fully enabled for mobile computing; SAAS soon

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1

Inc.

Simplifies the idea harvesting process, using an Agile approach, enabling both contests &strategic initiatives to be used, and integrates advanced gamification

Inc.

InnoMetrics uses adaptive boosting to enable smarter analysis of ideas in your innovation pipeline. Novel pivots map technology enables self-optimizing teams.

Inc.
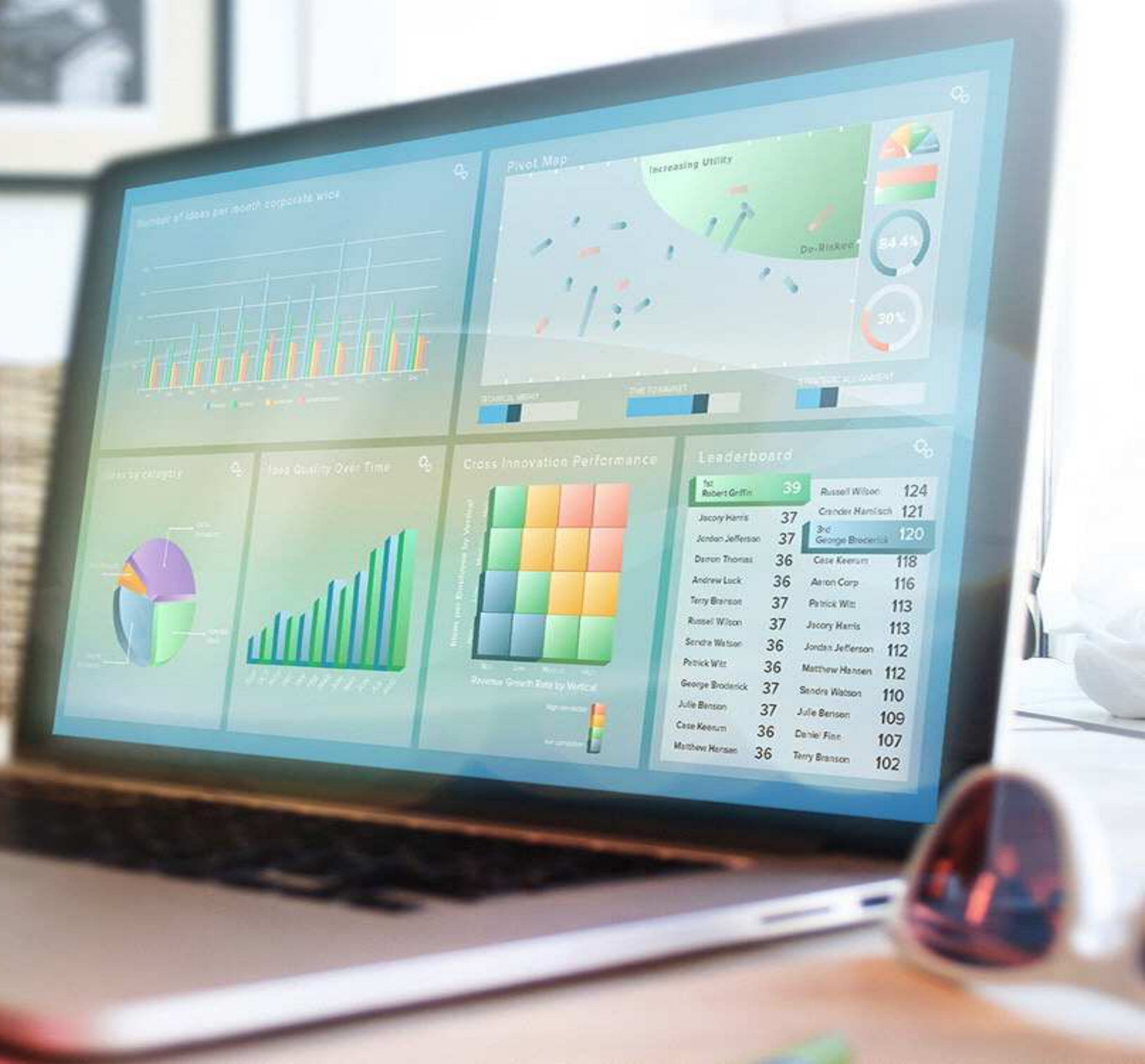
really understanding innovation

From ➜ To

From	To
Adhoc Invention	Managed Innovation
Gut Feel	Structured and Validated
Serendipitous	Well Organized
Opportunistic	Directed and Purposeful
Localized R&D	Globalized Multi-disciplinary Collaborative Teams
Project Mgmt Discipline	Agile Innovation Mgmt Discipline
Product Function	Customer intrinsic model

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Be there!
Silicon Valley
July 16-17, 2016

Early Bird
Registration

www.futurelabconsulting.com/index.php/insights/workshops/agile-innovation-with-co-facilitator-jeff-sutherland/individual-registration

What is LAPS? – What is the Purpose?

Closing time

Poll

Please participate in our exit poll

Contact

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Jeff Sutherland – jeff@scruminc.com

Parting thoughts

"If you always do what you always did, you will always get what you always got." – Albert Einstein

"Innovation is the ability to convert ideas into invoices." – L. Duncan

"The key to success is for you to make a habit throughout your life of doing the things you fear." – Vincent Van Gogh