



# Exponential Organizations

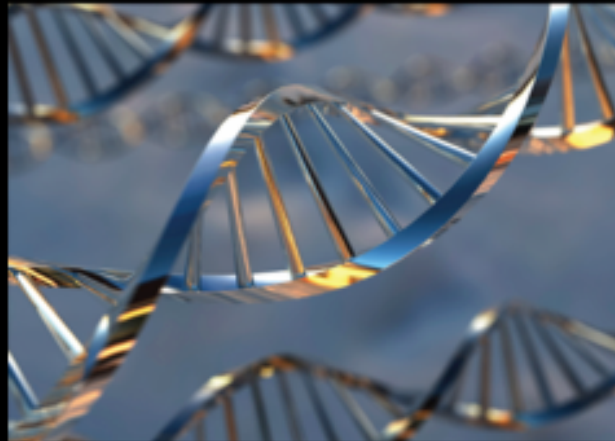
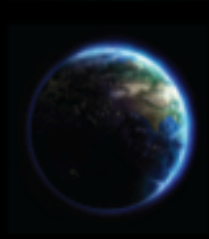
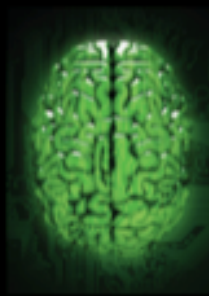
Keynote by Yuri van Geest



*The best vision  
on the future is  
peripheral vision*

# Accelerating Technologies

AI  
Robotics  
Biotech  
Nanotech  
Medicine  
Neuroscience  
Energy  
Computing



Singularity  
University

	<b>Cost (Averages) for Equivalent Functionality</b>	<b>Scale Impact</b>
3D Printing	\$40,000 (2007) to \$100 (2016)	400x in 9 years
Industrial Robots	\$500,000 (2008) to \$1,000 (2016)	500x in 8 years
Drones	\$100,000 (2007) to \$100 (2016)	1,000x in 9 years
Solar	\$30 per kWh (1984) to \$0.025 per kWh (2016)	1,200x in 22 years
Sensors (3D LIDAR sensor)	\$20,000 (2009) to \$79 (2014)	250x in 5 years
Biotech (DNA sequencing of one whole human)	\$10,000,000 (2007) to \$80 (2016)	125,000x in 11 years
Neurotech (BCI devices)	\$4,000 (2006) to \$90 (2011)	44x in 5 years
Medicine (full body scan)	\$10,000 (2000) to \$500 (2014)	20x in 14 years

# Audi RS 7 - Autonomous Car



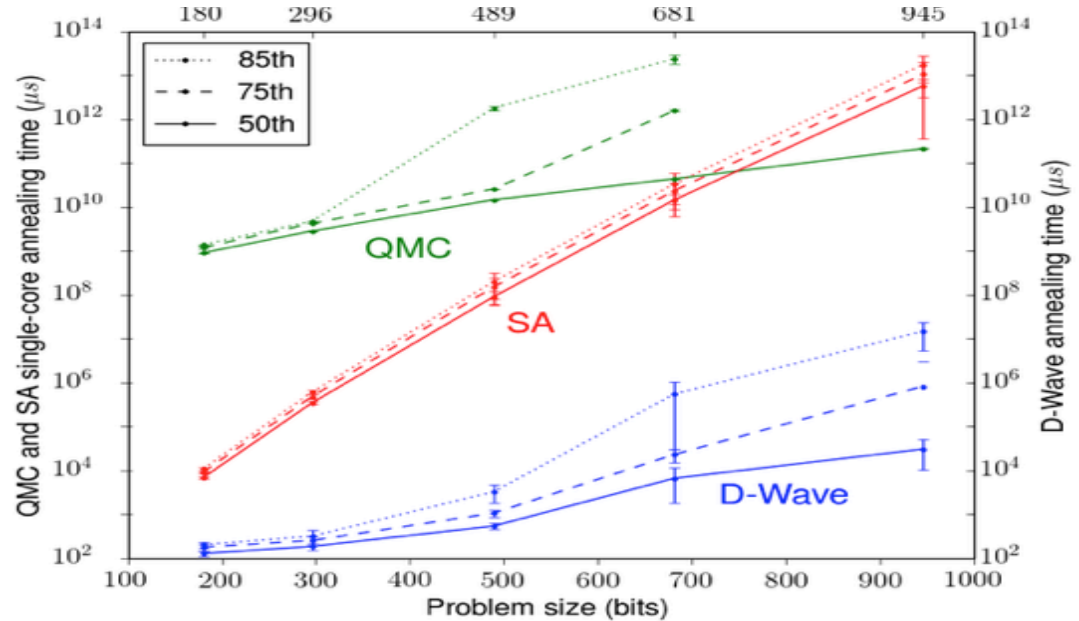
Audi RS 7 piloted driving concept





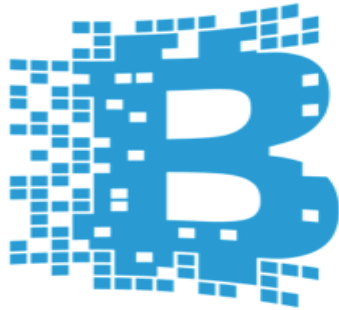


# Google & NASA - Quantum Computing



The D-Wave 2X quantum computer is **100 million times faster than a conventional computer**. Leaps in AI.

Even more disruptive is the  
**technology** behind Bitcoin:



**BLOCKCHAIN**

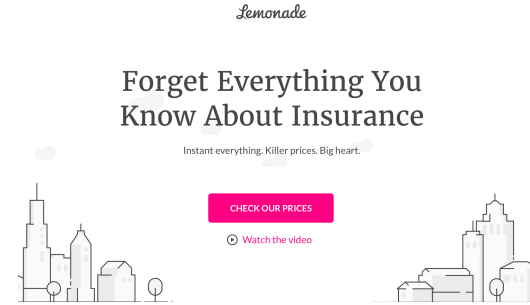
# Lemonade : world's first 'peer-to-peer' insurance company

## Outline:

- Licensed homeowners and renters insurance powered by artificial intelligence and behavioral economics.

## Impact:

- Replaces brokers and bureaucracy with bots and machine learning, reducing paperwork and instant everything



# Zero-employee Robot Factories

 **TOYOTA** + = SoftBank + **FOXCONN**<sup>®</sup>

**Toyota** - Japanese  
automotive  
manufacturer

**Softbank** - Japanese  
telecom & Internet  
corporation

**Foxconn** - Taiwanese  
electronics manufacturer



Factories with robots  
creating new robots (STM  
Machines)



Qi 華  
Nanophotonics

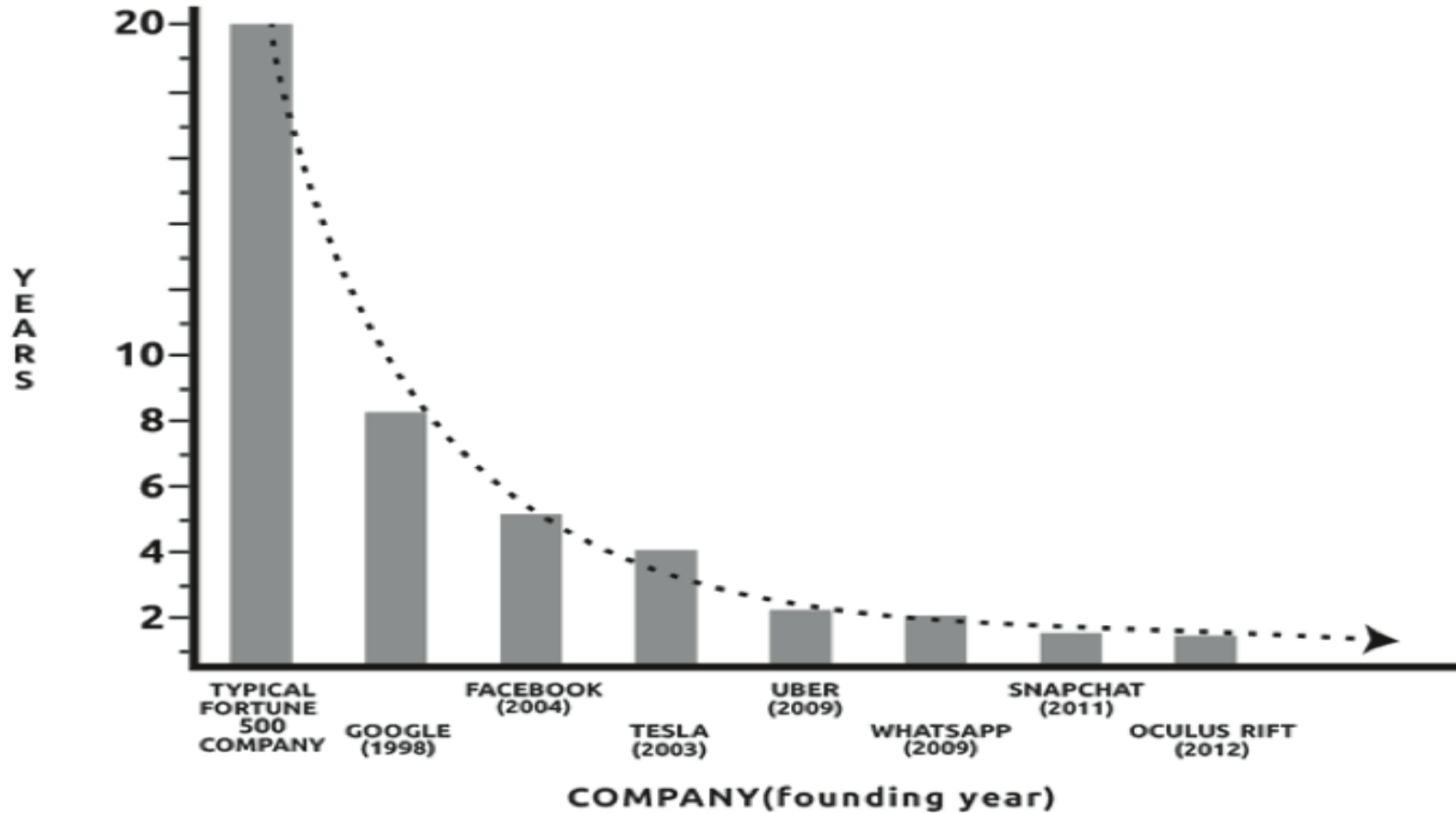
Platform-of-platforms of  
Light-based Technologies

# Exponential Organizations

“The average lifespan of an S&P 500 company has decreased from: 67 years (1920's) to 12 years (today).”

“The average half life of a business competency has dropped from 30 years in 1984 to 5 years today.”

# Market Cap to \$1B

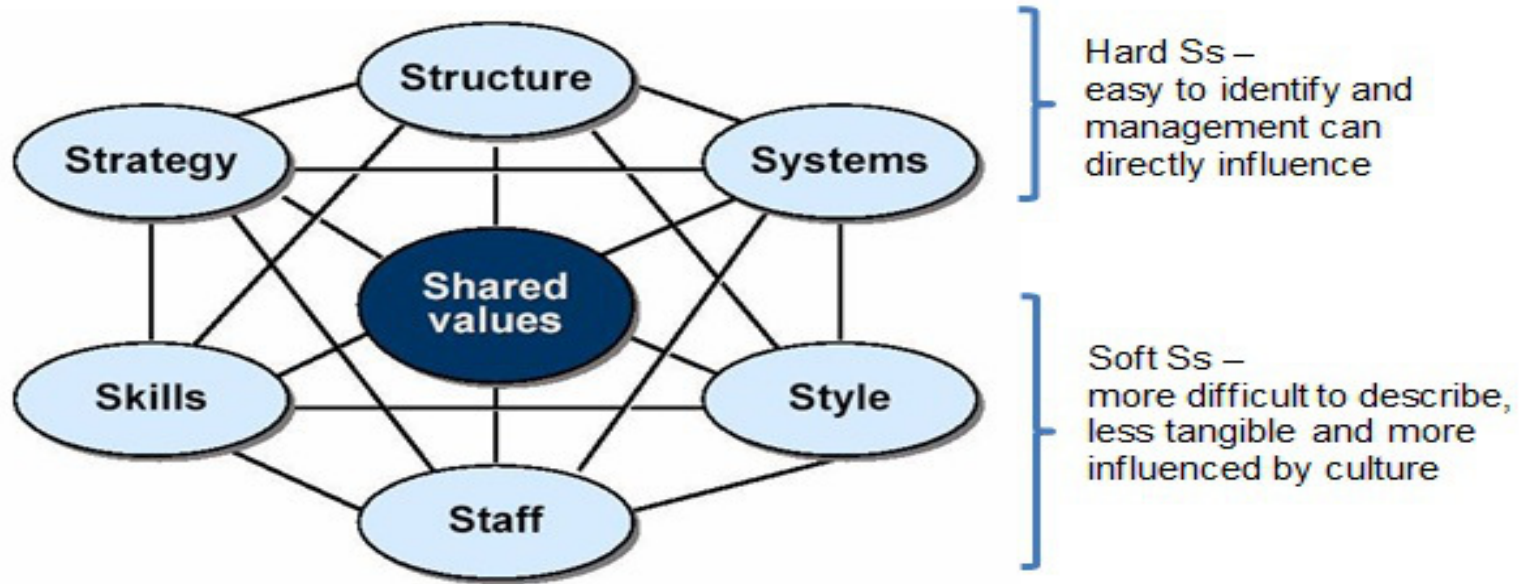


# Why Exponential Organizations?

# Scarcity vs. Abundance



# Ensuring all parts of your organization work in harmony



# Millennials



# What are Exponential Organizations?

An Exponential Organization (ExO) is one whose impact is disproportionately large

– **at least 10x larger** –

compared to its peers because of the use of new organizational design and leveraging exponential technologies.

# Every company will become a software company



Marc Andreessen

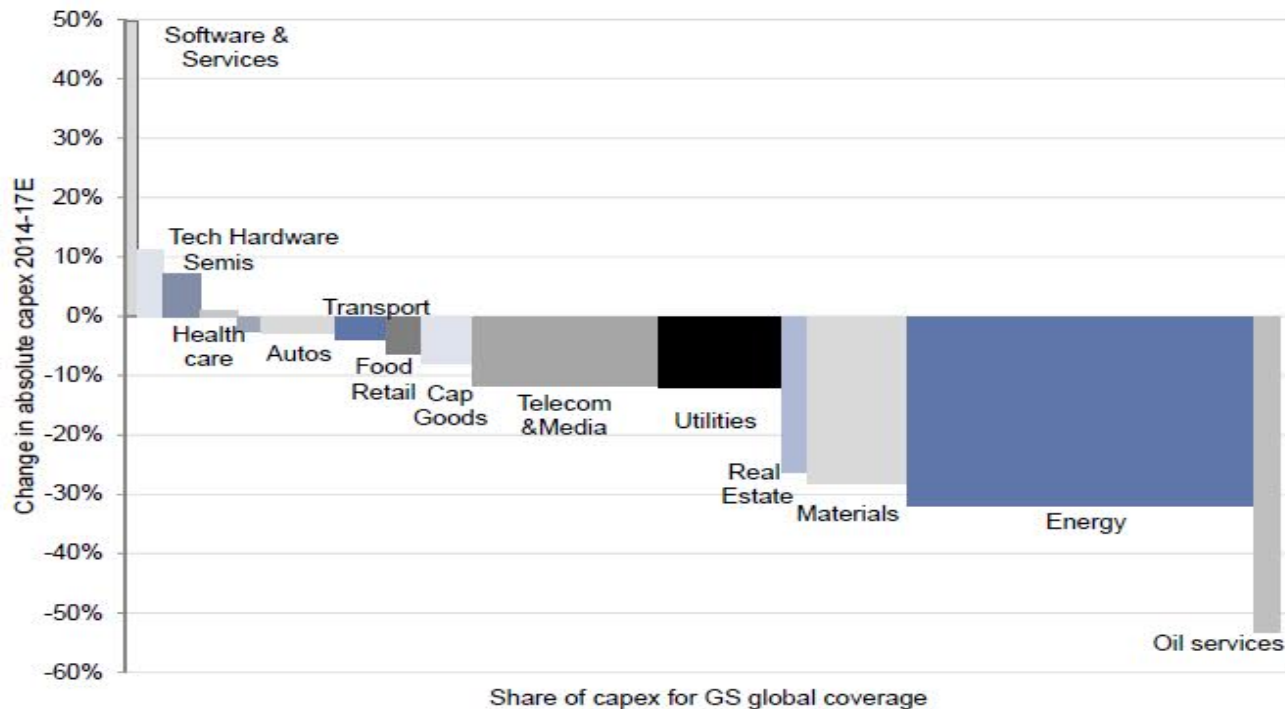
founder of Netscape,  
renowned Venture Capitalist  
Andreessen-Horowitz

“Software is  
eating the world,  
in all sectors.

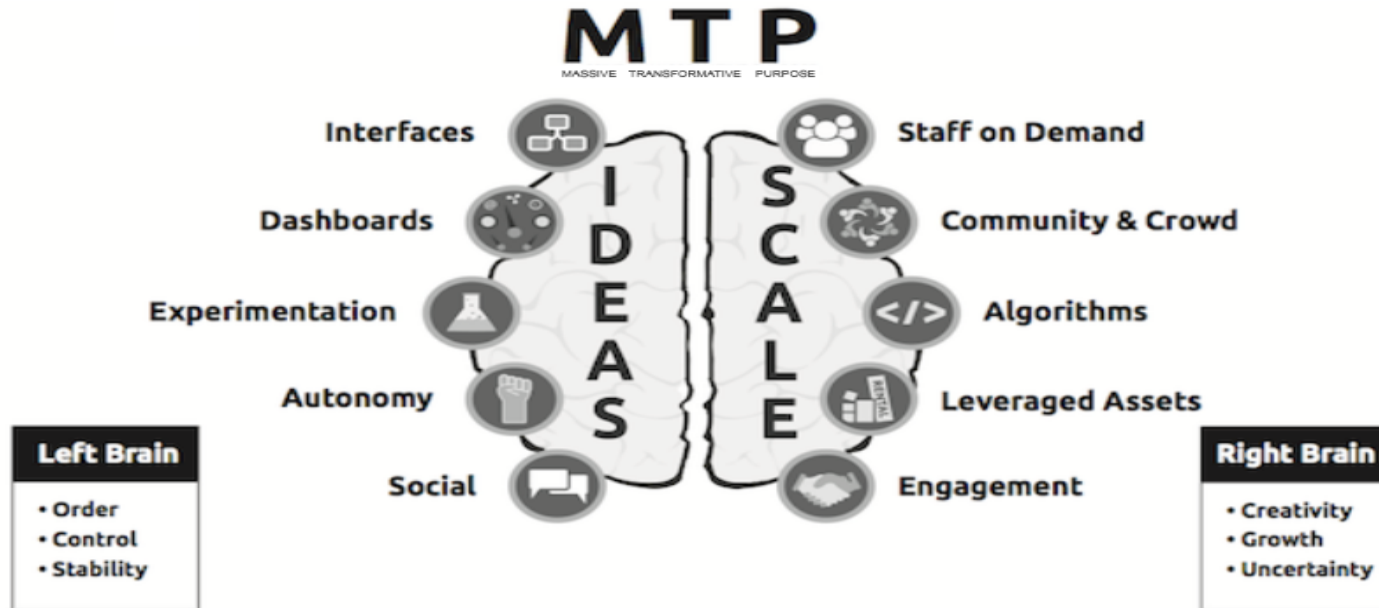
And (Quantum) AI is eating software  
afterwards.”

# Estimated share of capex by industry

Share of capex in 2014 vs. change 2014-2017E, GS global coverage



# ExO: MTP and leveraging 10 scalability techniques



# Massive Transformative Purpose

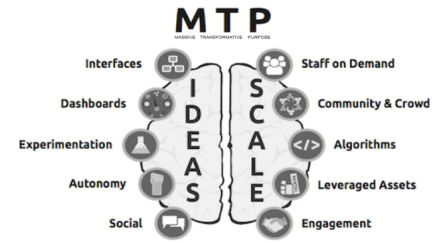
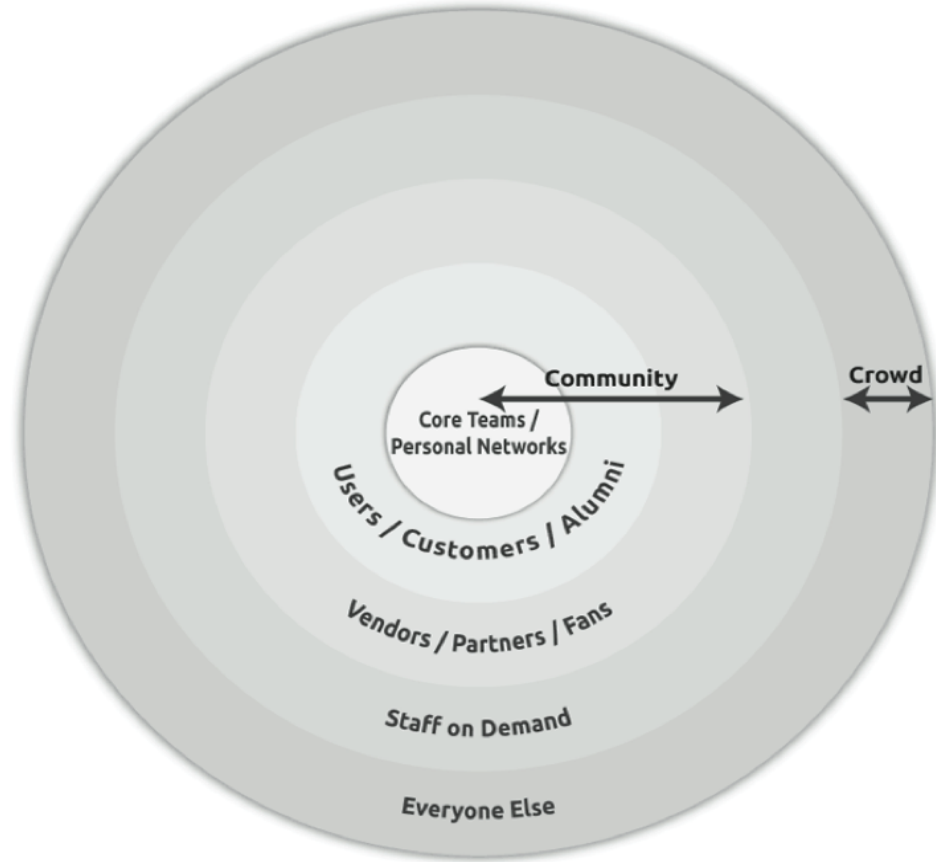
Uniquely yours  
Highly aspirational  
Aimed at Heart & Mind  
Neither narrow nor technological specific  
Declared with sincerity & confidence

# ExO attribute: Community & Crowds

Connect with your extended crowd. From customers, to staff on demand to detractors.

Invite them to share creativity, ideation, validation and even funding.

# Community & Crowds

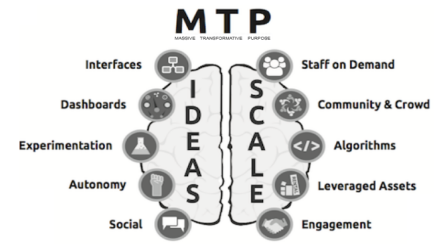


# ExO attribute: Algorithms

As the world turns into data, ExOs leverage Algorithms, including Machine Learning and Deep Learning to get new insights about customers and products.

AI can turn into a new product itself.

# Algorithms



# KENSHO: Accessible Machine Learning for Trading

## Outline:

- Introduce Machine Learning to banking / trading environment
- Potential to impact / supplement Quant analysis / research teams
- Instant financial analysis based on AI, potentially removes alpha

## Timeline:

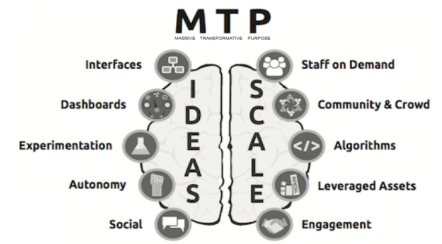
- Being used by several Wall Street banks

## ExO attribute: Dashboards / OKRs

Real-time, adaptable dashboard with essential company, product, service and employee metrics is a must for ExO's.

Short feedback loops, accessible to everyone in the organization.  
**OKRs** as agile learning metrics.

# Dashboards



Linked 

Google



# ExO attribute: Experimentation

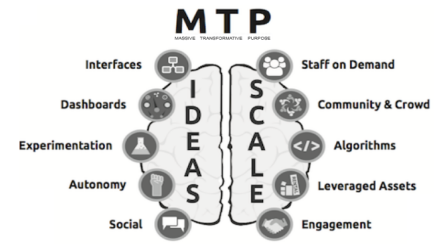
ExO's use Lean Startup & Design Thinking and other techniques to constantly experiment with new ideas and processes.

Create a culture that allows risk-taking and embraces failure.

# Experimentation



slack

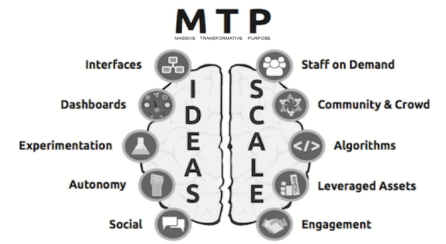


# ExO attribute: Autonomy

ExOs thrive in a flat organization that allows for self-organizing, multi-disciplinary teams.

It encourages employees to operate with decentralized authority.

Autonomy



Haier

GitHub

VALVE

# ExO: Organizational Design

# From hierarchical to exponential



Strategy based on  
extrapolation from past  
(5-year plans)



Strategy based on MTP and daily  
tests and customer insights (1-  
year plan)

# From hierarchical to exponential



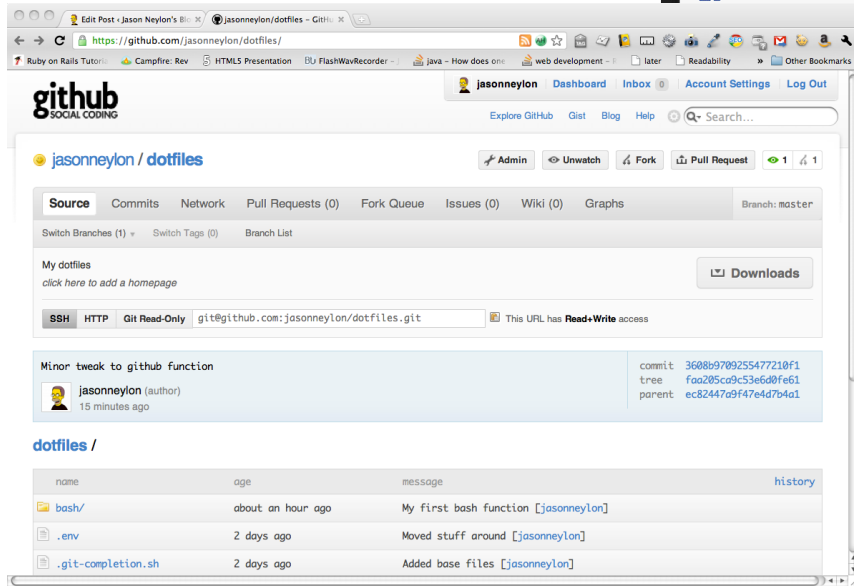
Process inflexibility and risk intolerance



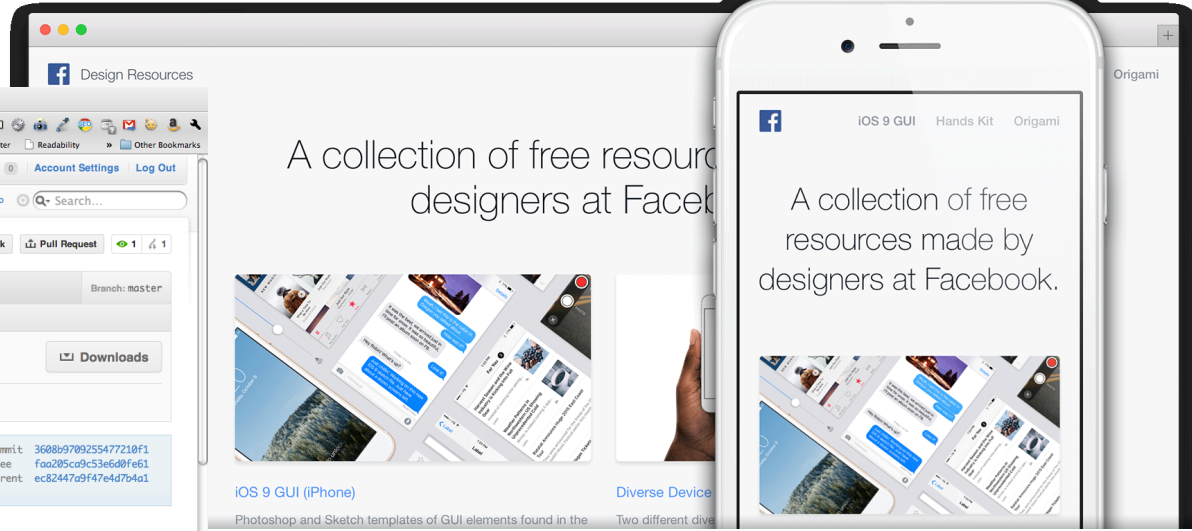
Flexibility, vulnerability and heroic failure celebration

# Examples of Exponential Organizations

# GitHub



Open source code and collaboration community  
14 million members (software coders)  
25 million repositories  
market cap of \$2B



Key differentiator: technical infrastructure of the internet as organizational design

# Haier



80,000 employees  
Organized in 2005 in 2,000  
self-managed units with decision-  
making authority (Autonomy)  
Market cap grew from \$20B to \$60B  
today in the last 3 years.

MTP

Staff on Demand

Community & Crowd

Algorithms

Leveraged Assets

Engagement



Interfaces

Dashboards

Experimentation

Autonomy

Social



# How to create an Exponential Organization?

# From Linear to Exponential Org

Transform Leadership  
Education | Adapted Style | Diversity

ExO  
Lite

Incubators  
Accelerators  
Hackerspaces

Partner  
Invest  
Acquire  
External ExOs

Internal ExOs on  
Edge

Black Ops



***REALITY IS A  
PERMANENT  
MUSEUM***

More slides on  
Exponential Organizations &  
Exponential Technologies?

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