

# LEARN & WORK FUTURES

**Parminder Jassal, Ph.D.**

**May 4, 2017**

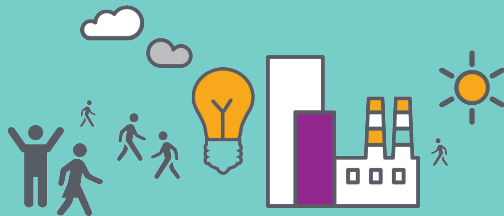


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FUTURES



# Future in Facts V. Future in Episodes

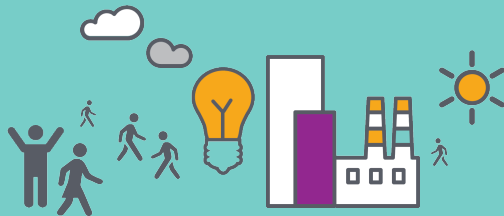
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# Future in Facts V. Future in Episodes

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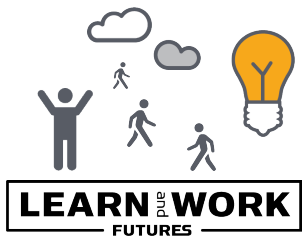
# Personal Futures

*trepidation instead of tranquility?*

*history repeating itself?*

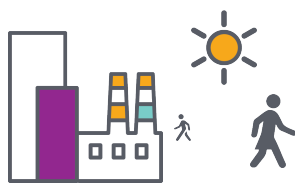


*scared of the unknown?*





# Personal Futures



FutureMirror App

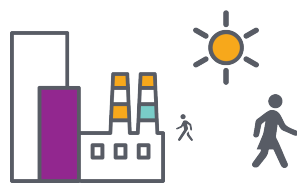


# Personal Future 2027

**YOUR** Body

**YOUR** Family

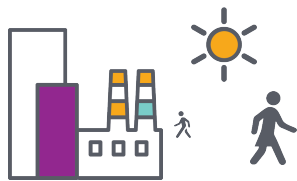
**YOUR** Free Time



# SELF-DRIVING CAR

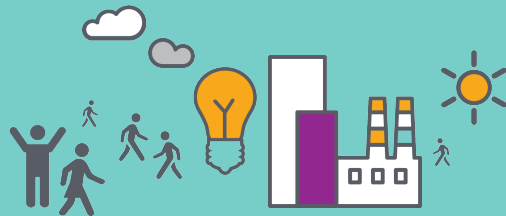
## ONE WORD ANSWER

### HOW WOULD YOU FEEL?

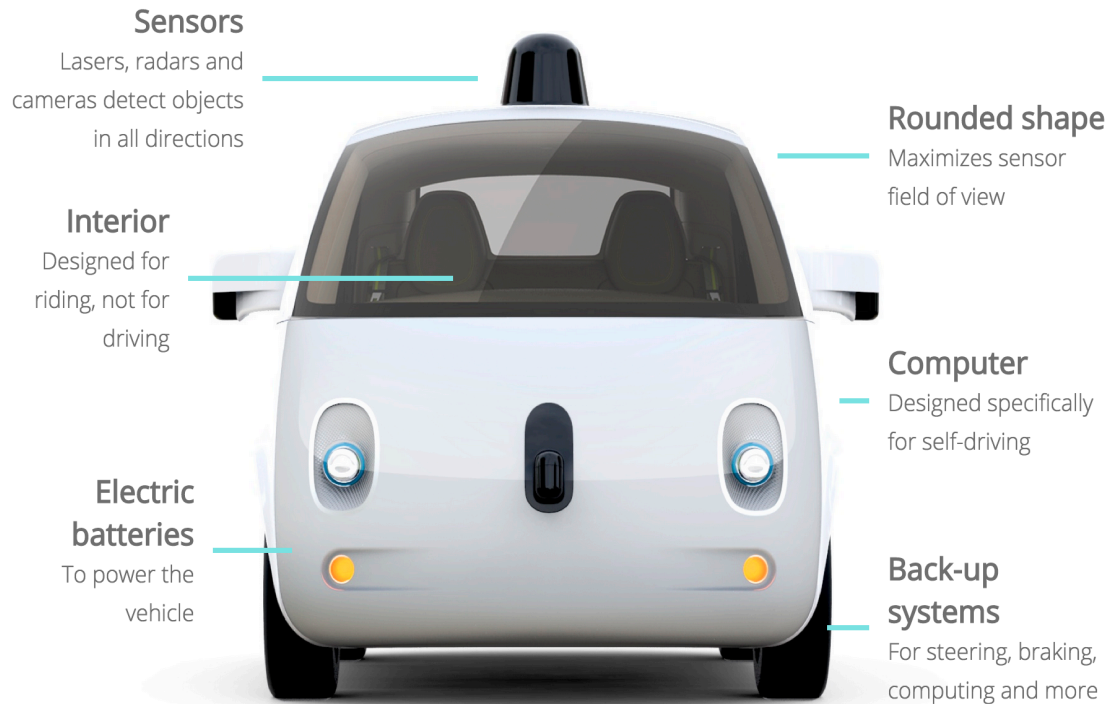


# SIGNALS OF THE FUTURE

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# Look Forward



FROM SLATE, NEW AMERICA, AND ASU

# To Boldly Go Nowhere, for Now

Why we should hit pause on manned space exploration.

By *Srikanth Saripalli*



Future space explorers should be somewhere between human astronauts and robots like NASA's Curiosity rover on Mars.

Courtesy of NASA/JPL-Caltech/MSSS

Show apps

**WIRED**

Technology

Science

Culture

Video

Reviews

Magazine

# IBM's Watson is better at diagnosing cancer than human doctors

By IAN STEADMAN

Monday 11 February 2013



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# 'Love is still love': Woman has hots for robot in new CNN series

By [Andrea Morabito](#)

March 8, 2017 | 7:51pm | Updated

## Experts predict human-robot marriage will be legal by 2050





# "Mother" Robot Builds Evolving Babies

**28.0K**  
SHARES



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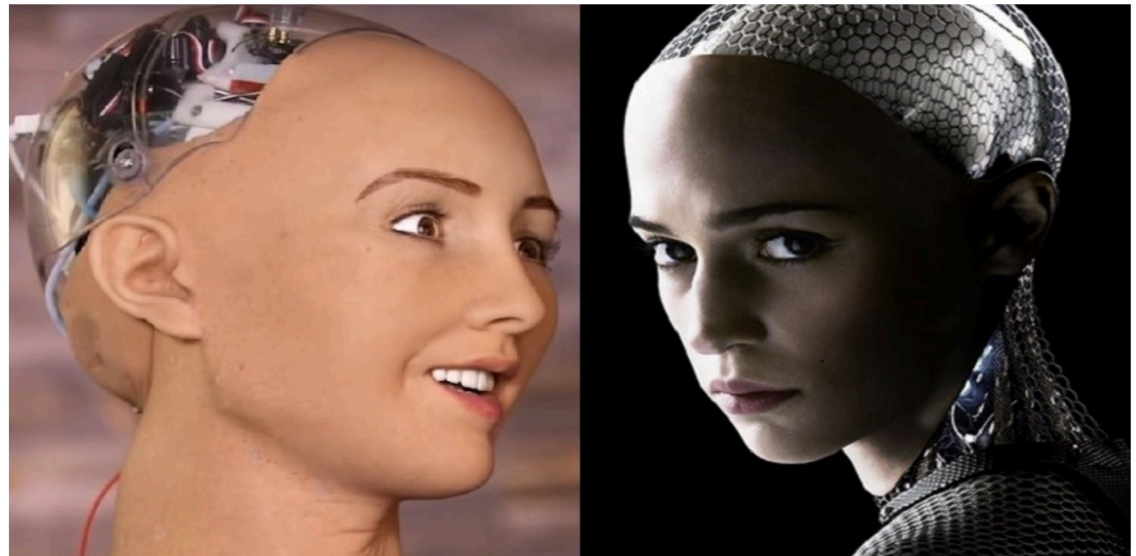
## Morphological Evolution of Physical Robots through Model-Free Phenotype Development

Luzius Brodbeck , Simon Hauser, Fumiya Iida

Published: June 19, 2015 • <https://doi.org/10.1371/journal.pone.0128444>

# Experts work to turn artificial intelligence into a friendly face – but it doesn't always succeed

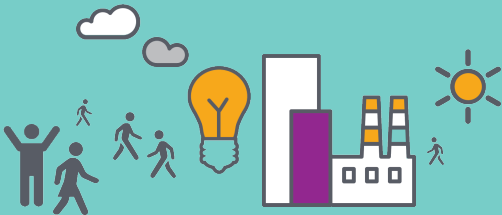
BY **ALAN BOYLE** on March 25, 2016 at 1:15 pm



Hanson Robotics' Sophia (left) represents the state of the art in "friendly" AI robots, while the AI robot Ava from "Ex Machina" (played by Alicia Vikander, at right) represents a sci-fi vision of where the robotics field could go. (Credit: CNBC / Hanson Robotics / A24 Films)

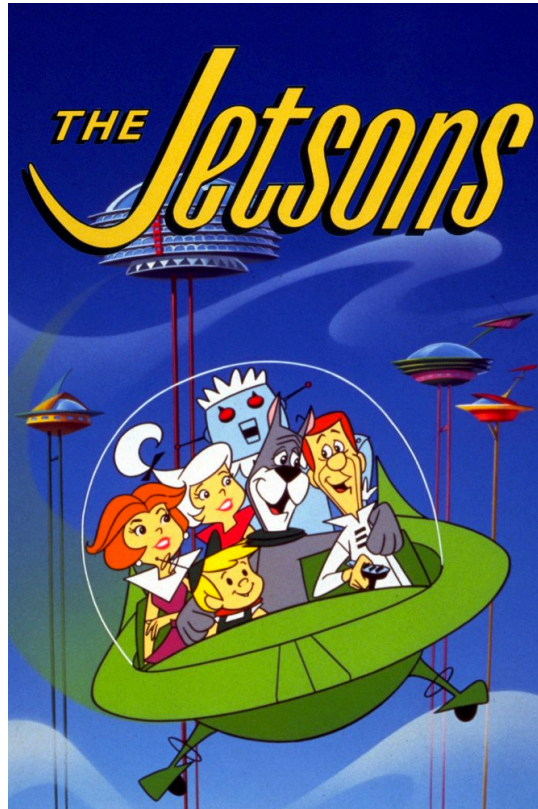
# SIGNALS FROM THE PAST

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# Exponential Progress: 10x10x10

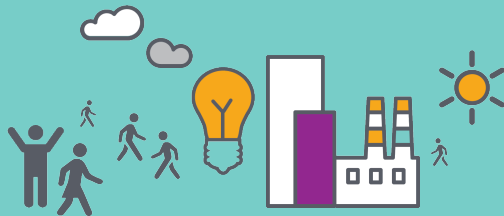
20 years → 14

14 years → 7

7 years → 3.5

Source: Varner Vinge & Ray Kurzweil

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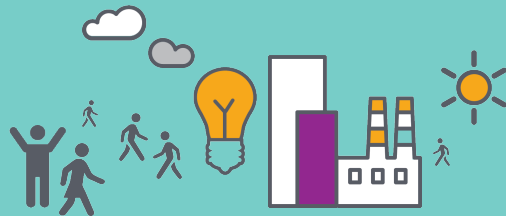


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# In the 21<sup>st</sup> Century 20,000 years of progression

Source: Varner Vinge & Ray Kurzweil

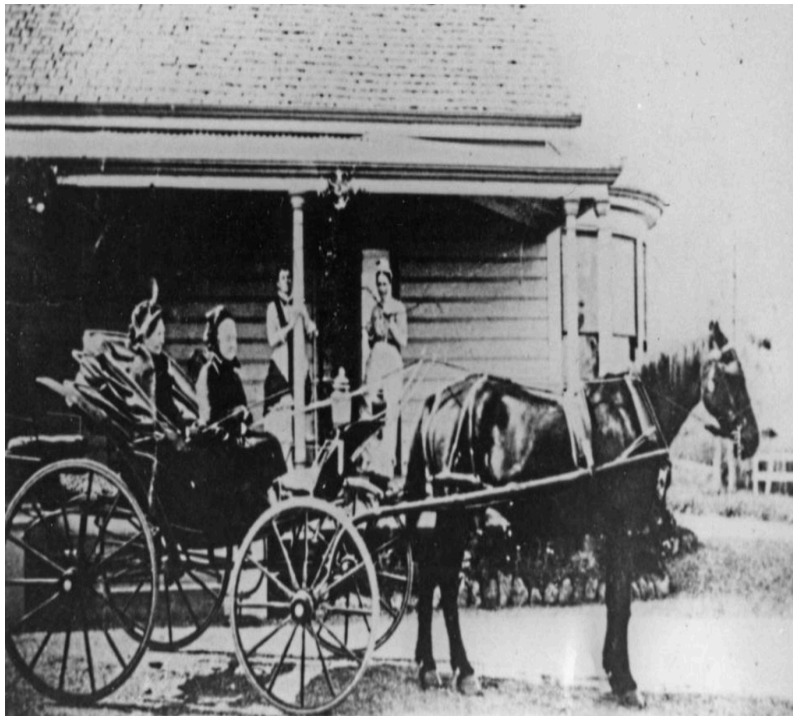
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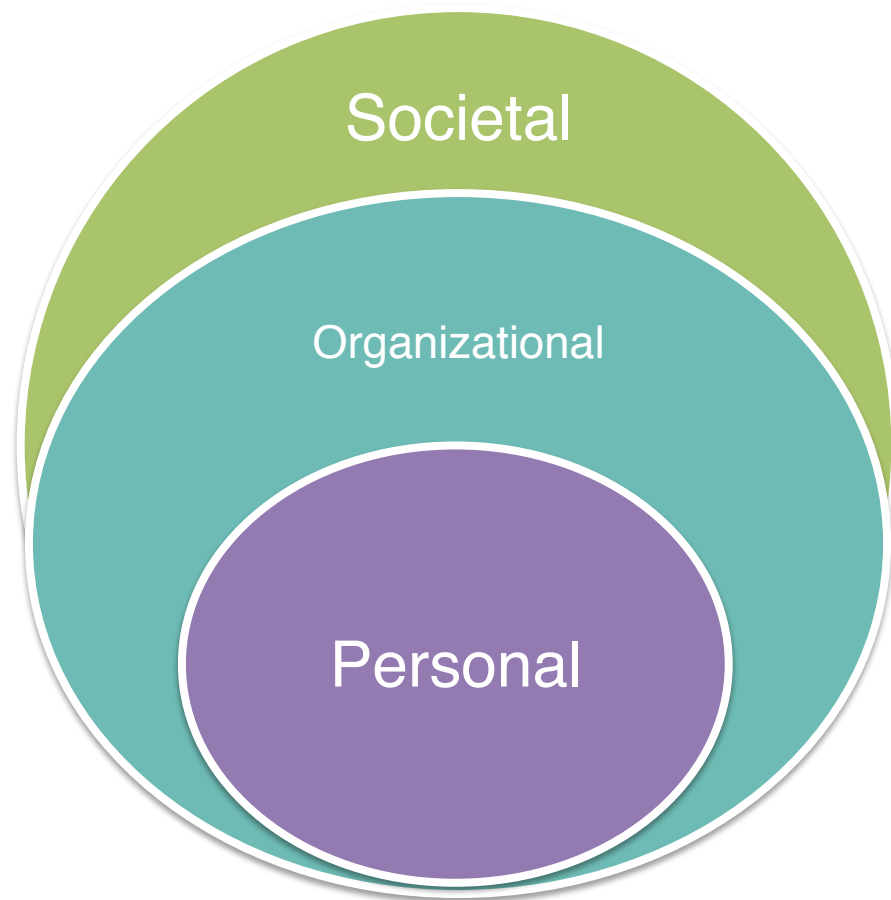
# Horse & Buggy



# ➔ Mars 3 on Mars



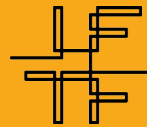
# Preferred Future





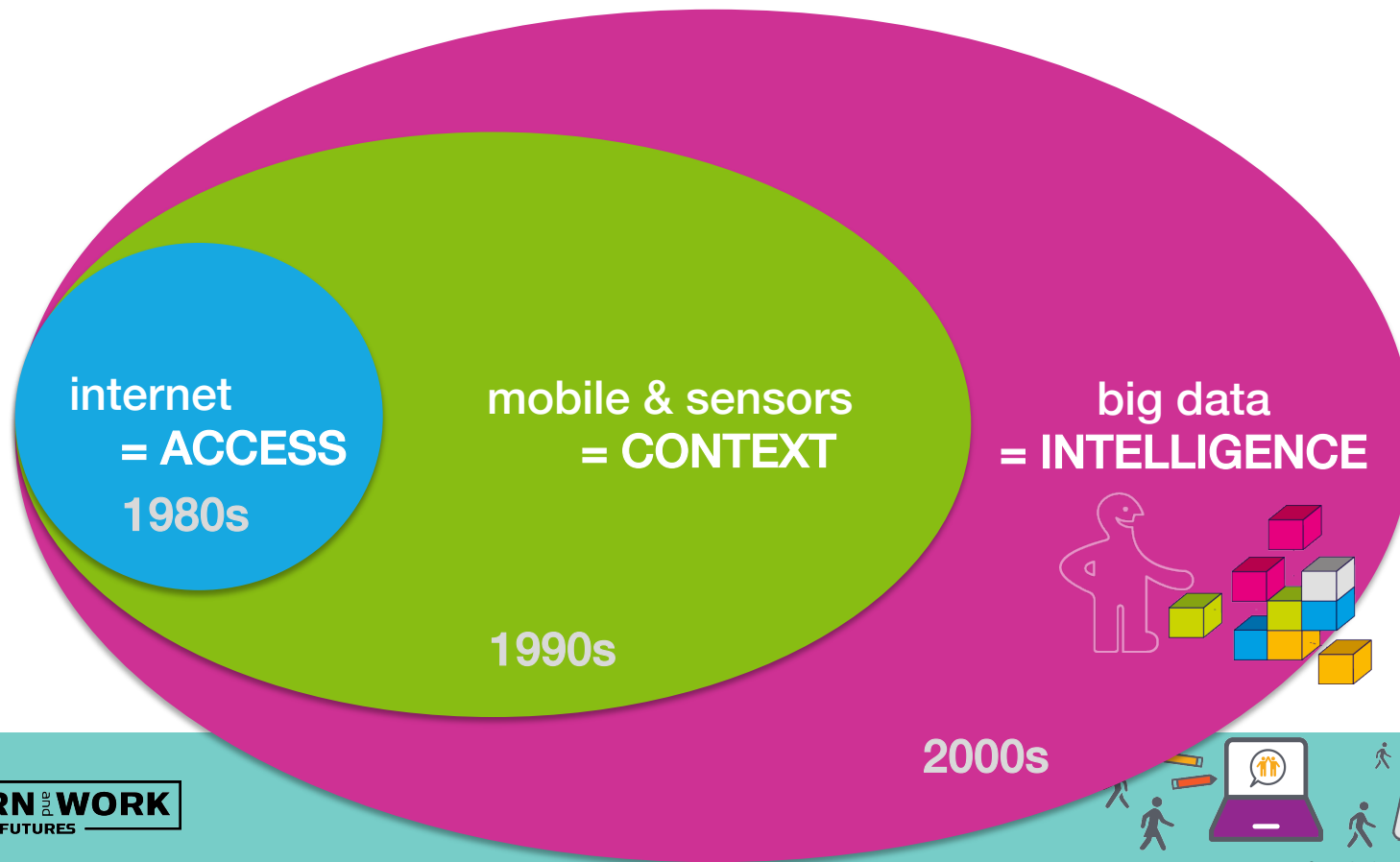


# Future of Work



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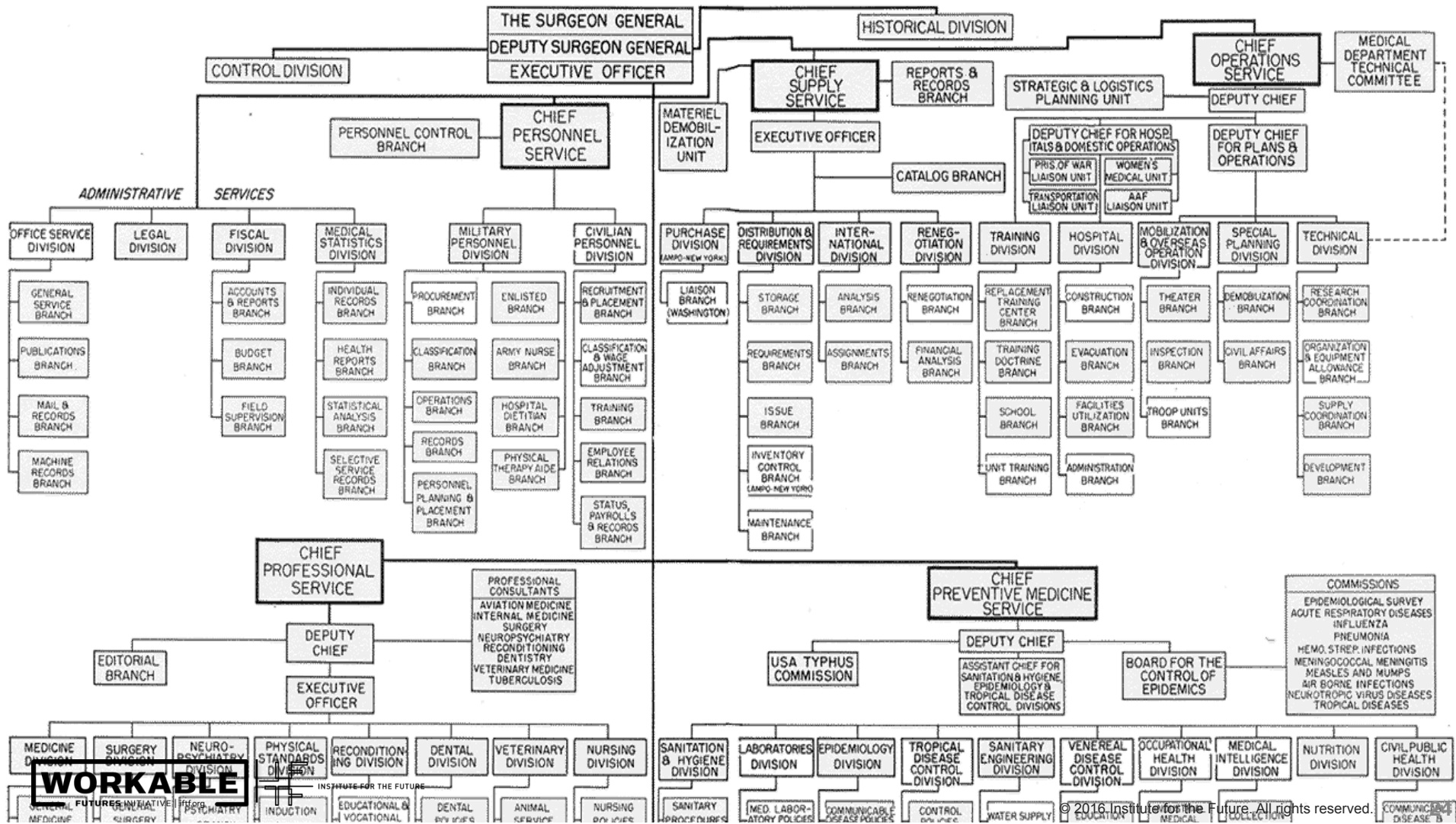
# the digital coordination economy

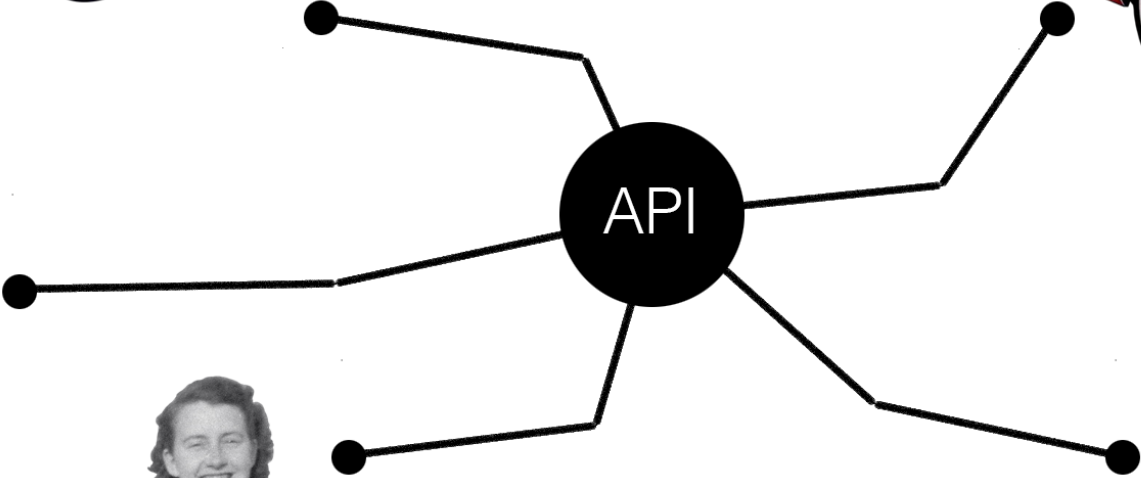
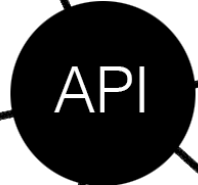
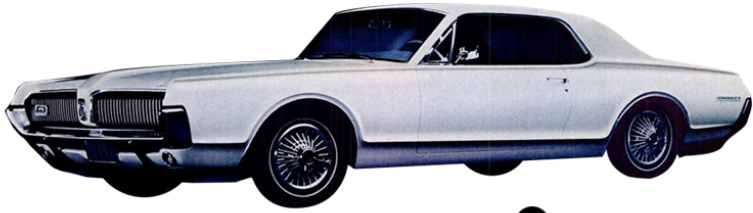


# the digital coordination economy

- Micro-contributions or tasks, *not* jobs
- Large networks, *not* few employees
- Algorithmic coordination, *not* management







**WORKABLE**  
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# digital coordination economy at work: iCEO

Query Editor

Combined

Preview downloaded on Wednesday.

Table.RemoveColumns(Source ('File Version'))

ID	Build	SQLSERVERLXE Build	File version	Q	KB	Description	Date Updated	Availability
1	11.00.9000	11.0.9000	2011.11.0.9000.5	null	null	Microsoft SQL Server 2012 With Power View For Multidimensional Model	11/07/2012	Downloadable
2	11.00.9000	11.0.9000	2011.11.0.9000.0	Q281201	K8282011	2812017 Fix: You can't create or open SSD projects or workspace plans	Error	Downloadable
3	11.00.9000	11.0.9000	2011.11.0.9000.0	Q281241	K828241	2812412 Cumulative update package 3 (CU3) for SQL Server 2012 Service	1/28/2013	Downloadable
4	11.00.9000	11.0.9000	2011.11.0.9000.0	Q279094	K8279094	2790947 Cumulative update package 2 (CU2) for SQL Server 2012 Service	1/05/2013	Downloadable
5	11.00.9000	11.0.9000	2011.11.0.9000.0	Q280005	K8280005	2800050 Fix: Component installation process fails after you install SQL Ser	1/4/2013	Downloadable
6	11.00.9000	11.0.9000	2011.11.0.9000.0	Q279063	K8279063	2790634 Cumulative update package 1 (CU1) for SQL Server 2012 Service 2	11/09/2012	Downloadable
7	11.00.9000	11.0.9000	2011.11.0.9000.0	null	null	SQL Server 2012 Service Pack 1 (SP1)	1/9/2013	Downloadable
8	11.00.9000	11.0.9000	2011.11.0.9000.0	null	null	SQL Server 2012 Service Pack 1 Customer Technology Preview 4 (CTPA)	6/20/2012	Downloadable
9	11.00.9000	11.0.9000	2011.11.0.9000.0	null	null	SQL Server 2012 Service Pack 1 Customer Technology Preview 3 (CTPA)	2/9/2012	Downloadable
10	11.00.9000	11.0.9000	2011.11.0.9000.0	Q282324	K8282324	2823247 Cumulative update package 7 (CU7) for SQL Server 2012	Error	Downloadable
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12	11.00.9000	11.0.9000	2011.11.0.9000.0	Q277777	K8277777	2777772 Cumulative update package 5 (CU5) for SQL Server 2012	11/28/2012	Downloadable
13	11.00.9000	11.0.9000	2011.11.0.9000.0	Q279688	K8279688	2796887 Cumulative update package 4 (CU4) for SQL Server 2012	10/24/2012	Downloadable
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15	11.00.9000	11.0.9000	2011.11.0.9000.0	Q272374	K8272374	2723749 Cumulative update package 3 (CU3) for SQL Server 2012	8/29/2012	Downloadable
16	11.00.9000	11.0.9000	2011.11.0.9000.0	Q270127	K8270127	2701275 Cumulative update package 2 (CU2) for SQL Server 2012	6/28/2012	Downloadable
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18	11.00.9000	11.0.9000	2011.11.0.9000.0	null	null	Microsoft Security Bulletin MS12-070	10/9/2012	Downloadable
19	11.00.9000	11.0.9000	2011.11.0.9000.0	Q286530	K8286530	2865308 Fix: SAS uses only 20 cores in SQL Server 2012 Business Intellig	4/6/2012	Downloadable
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Refresh Settings Done



LEARN the WORK  
FUTURES



# Race Against Institutions and Culture



How the Digital Revolution is Accelerating Innovation,  
Driving Productivity, and Irreversibly Transforming  
Employment and the Economy

“ The business plans for the next 10,000 startups are easy to forecast: Take X and **add A.I.** ”

–Kevin Kelly  
Futurist





# VOICES of Workable Futures

“  
It started out as a way to make ends meet, but it's opened my eyes to a whole other way of life. Out of the box. You get to interact with people. It's easy—it doesn't feel like work.”



**part-time pragmatist**  
harnessing assets and hedging their bets

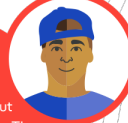


**savvy consultants**  
gaming the platforms to grow a practice

“  
I can make almost as much money as I did with the big firm, but I can be at home while I do it. I can work in the middle of the night so I can spend time with my kids. I approach everything as a negotiation, and I can always hire help on the platform if I need it.”



“  
Money's floating all the time and work is out there, but you gotta hustle. The freedom of on-demand work is if you don't want to look, you don't have to. But if you stop looking, it's really easy to fall into a hole.”



**hustler**  
monetizing daily life

**freelancer**  
selling skills on a platform



“  
I like to have my own flexible schedule and I don't like to go to work at the same place every day. I like to travel and you can't do that when you work full-time. I love it. It does take the right alignment of skills and drive to get the gigs that pay what you want to make.”



**entrepreneur**  
maximizing platforms for small business



“  
Big companies better watch out. We thrive because we use platforms, but always with our own brand.”



**re-entry worker**  
thriving on the road to recovery



“  
I'm just getting my act back together—it's overwhelming. I want to change everything. I'll start with this alternative. But it's not very secure financially.”



**full-time gig worker**  
earning a livelihood in an on-demand world

“  
There are good days and bad days. Good platforms and bad platforms...and sometimes they change overnight. But at the end of the day, it's still \$20 an hour.”



**extreme longevity**

Increasing global lifespans change the nature of careers and learning

**computational world**

Massive increase in sensors and processing power make the world a programmable system

**superstructured organizations**

Social technologies drive new forms of production and value creation

Trans-disciplinarity

Design Mindset

Sense-Making

New Media Literacy

Social Intelligence

Computational Thinking

Cross Cultural Competency

Novel and Adaptive Thinking

Cognitive Load Management

Virtual Collaboration

**rise of smart machines and systems**

Workplace robotics nudge human workers out of rote, repetitive tasks

**new media ecology**

New communication tools require new media literacies beyond text

**globally-connected world**

Increased global interconnectivity puts diversity and adaptability at the center of organizational operations

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# REFRESH AVAILABLE NEXT YEAR

extreme  
longevity

Increasing global lifespans  
change the nature of  
careers and learning

computational  
world

Massive increase in sensors  
and processing power  
makes the world a program  
system

superstructured  
organizations

Advanced technologies drive  
new forms of production  
and value creation

Trans-  
disciplinarity

Sense-  
Making

Cross  
Cultural  
Competency

Virtual  
Collaboration

Cognitive  
Load  
Management

rise  
macro  
systems

Workplace robots  
human workers  
repetitive tasks

new media  
ecology

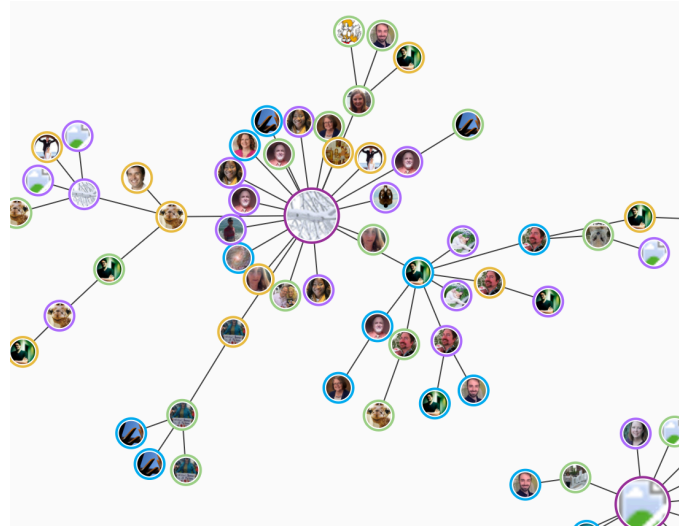
New communication tools  
require new media litera-  
cies beyond text

globally-  
connected world

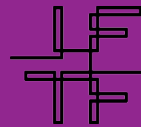
Increased global  
interconnectivity puts  
diversity and adaptability  
at the center of  
organizational  
operations

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# Future of Learning



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# Charting Pathways to Second Curve Innovation

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# Charting New Innovation Pathways

for the  
California Community  
Colleges

**SNEAK PEAK**

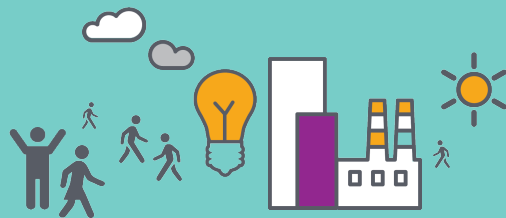


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# FROM FIRST CURVE TO SECOND CURVE

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First Curve

Second Curve



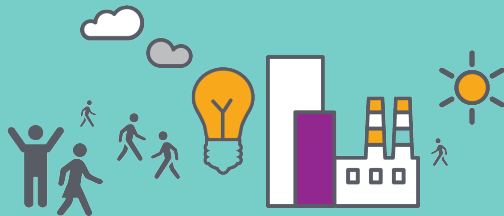
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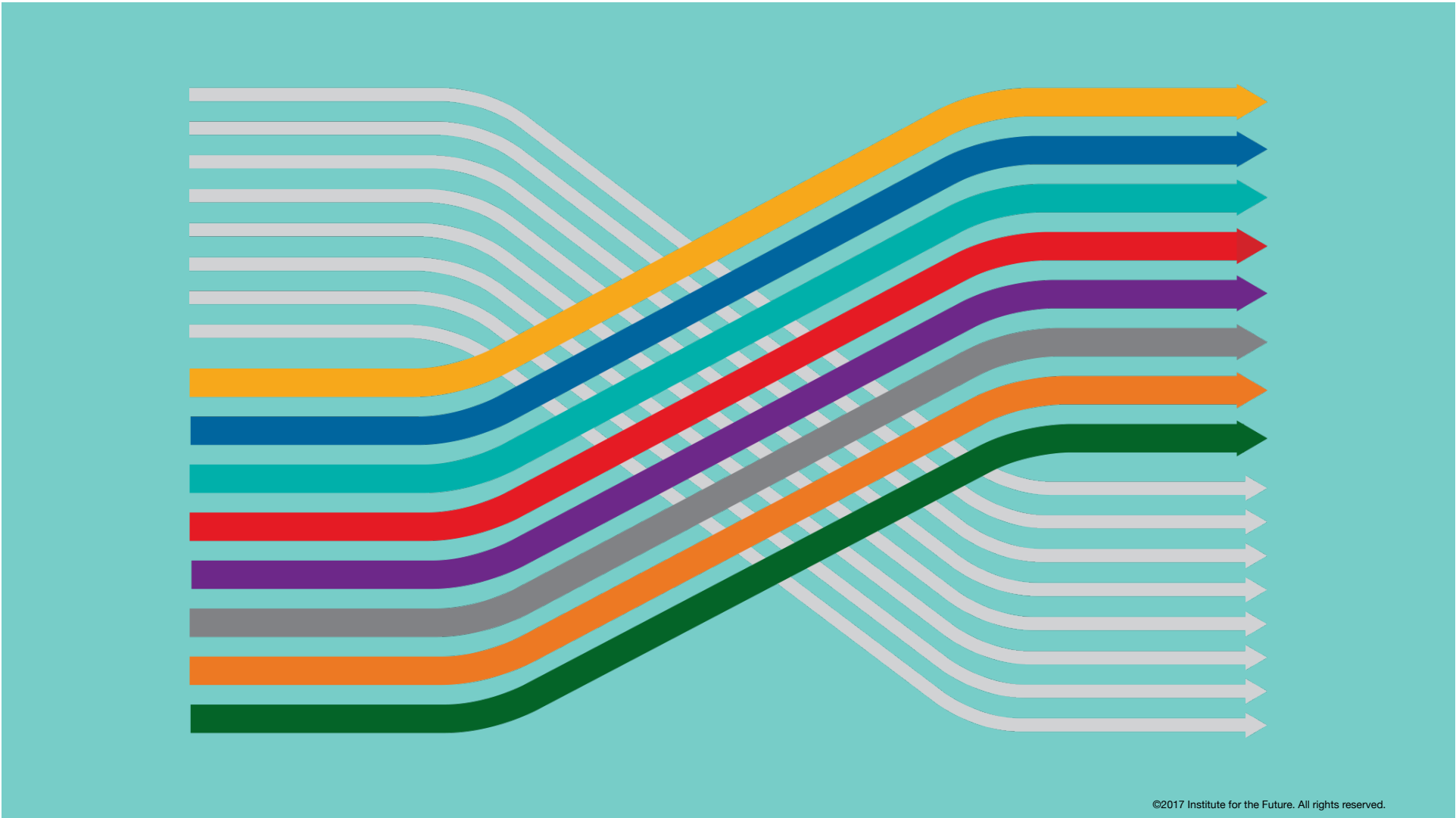




# FROM "BUSINESS AS USUAL" TO "NEW NORMAL"

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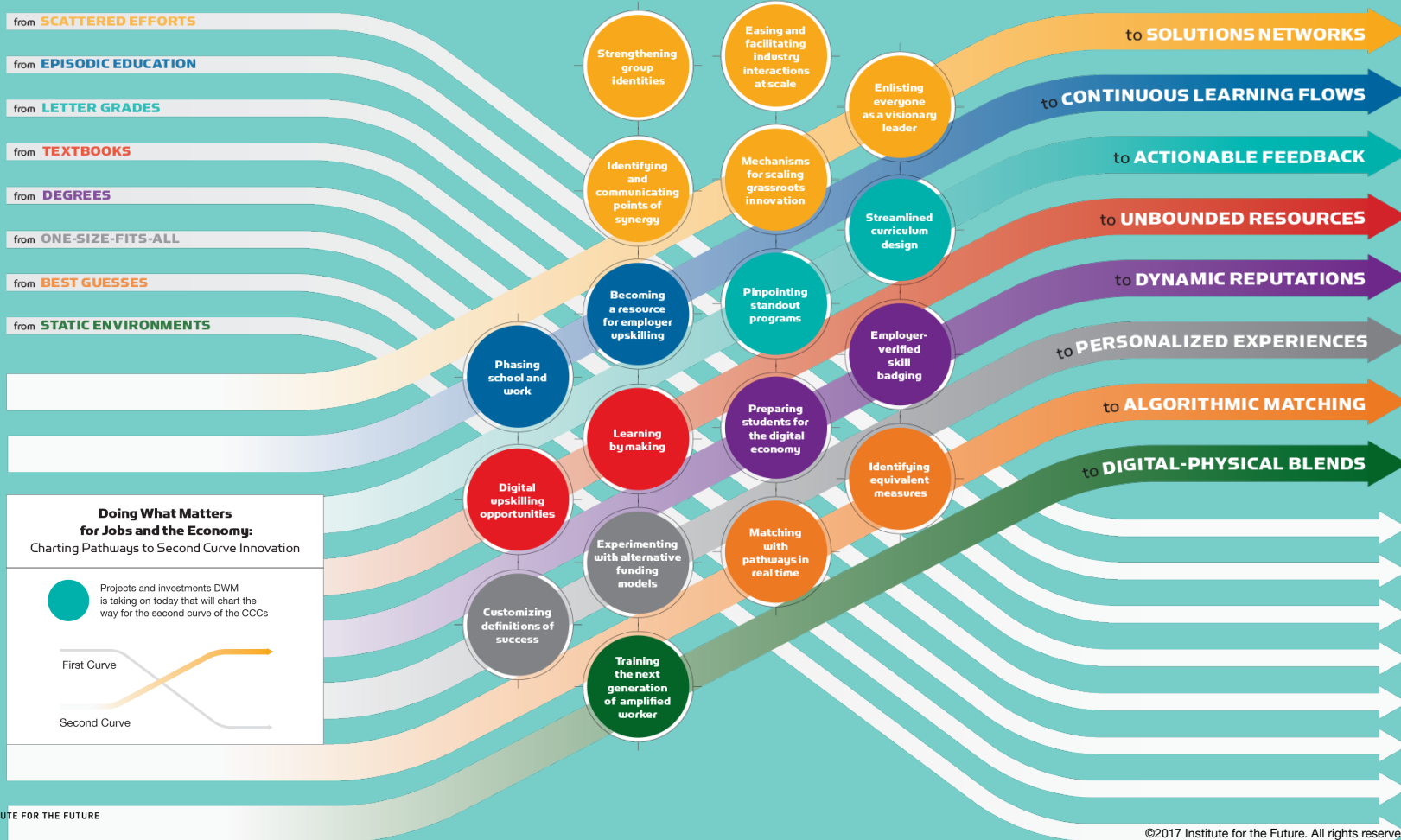


## FROM → TO

- Scattered Efforts →
- Episodic Education →
- Letter Grades →
- Textbooks →
- Degrees →
- One-size Fits All →
- Best Guesses →
- Static Environments →
- Solution Networks
- Continuous Learning Flows
- Actionable Feedback
- Unbounded Resources
- Dynamic Reputations
- Personalized Experiences
- Algorithmic Matching
- Digital Physical Blends

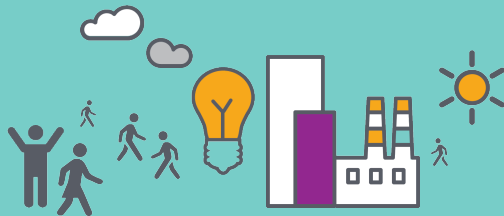


# Charting New Innovation Pathways for the California Community Colleges



# FROM DEGREES TO REPUTATIONS

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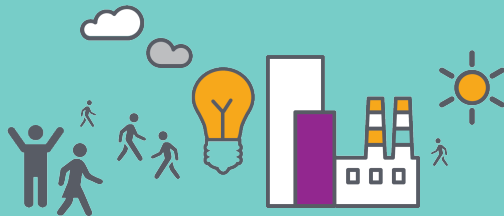
signal: preparing students for the digital economy

Professional growth on  
**upwork**



# Resumes to Reputation

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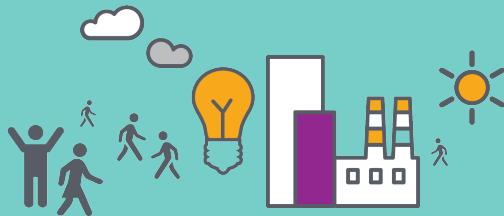
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signal: digital badging



# Degrees to Reputation

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# LEARN <sup>FOR</sup> WORK

## FUTURES



- **Future Skills**
- **New-Age Learn & Work Models**
- **Different Safety Nets & Milestones**



# PERSONAL FUTURES - VOTING

## ONE WORD ANSWERS

WHICH COUNTRY?  
HOW WOULD YOU FEEL?

