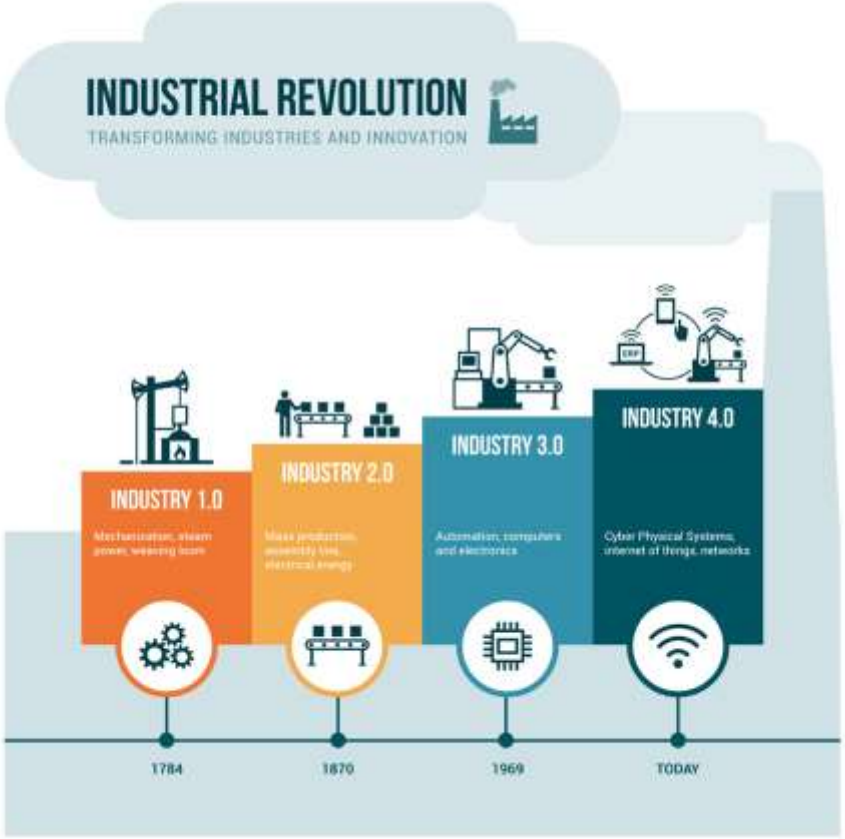
Big Shifts that Will Transform Planning, APA and Your Work

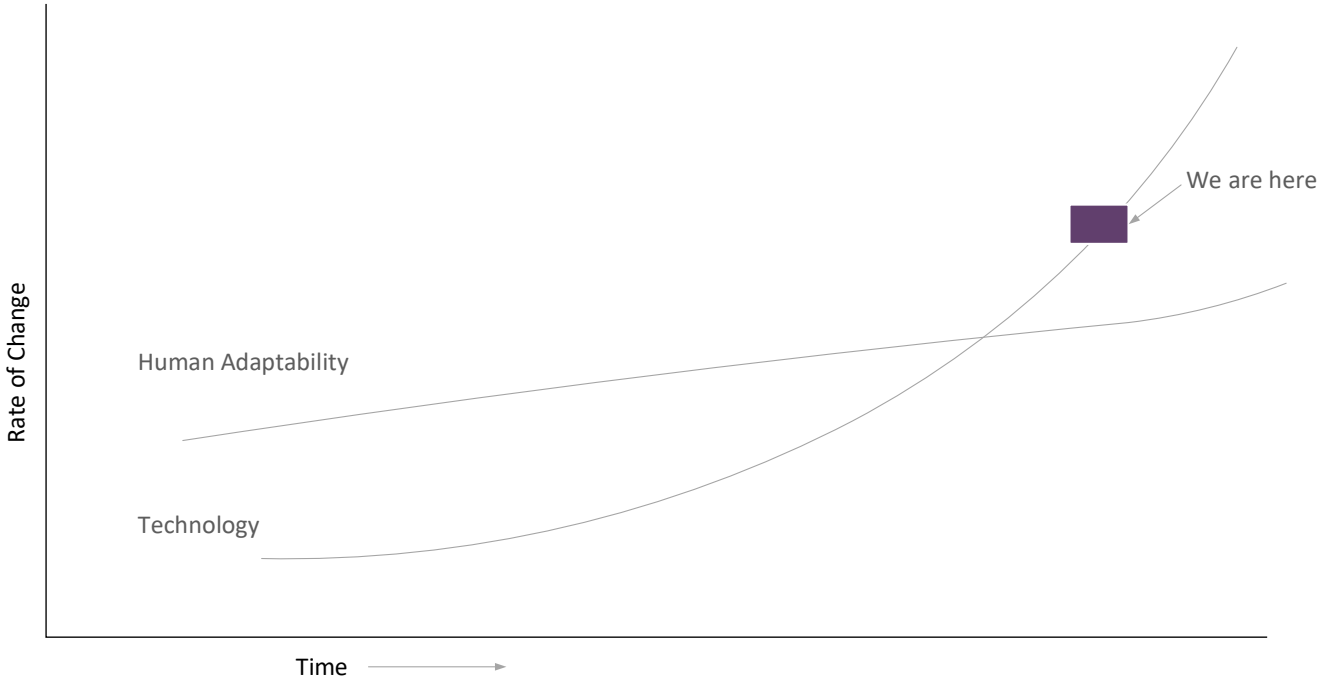
Joel Albizo, FASAE, CAE

Chief Executive Office

American Planning Association


INDUSTRIAL REVOLUTION
TRANSFORMING INDUSTRIES AND INNOVATION
INDUSTRY 1.0
INDUSTRY 2.0
INDUSTRY 3.0
Automation, computers and electronics
INDUSTRY 4.0
Cyber Physical Systems, internet of things, networks
1784
1870
1969
TODAY

Technology has exceeded our ability to adapt



9:41
Tuesday, September 12

By 2021 the number of devices with built-in AI assistants will exceed the Earth's population.

--American Society of Association Executives Foundation

"For Father's Day, I'm giving my dad an hour of free tech support."

WARNER BROS

Volatility
Uncertainty
Complexity
Ambiguity

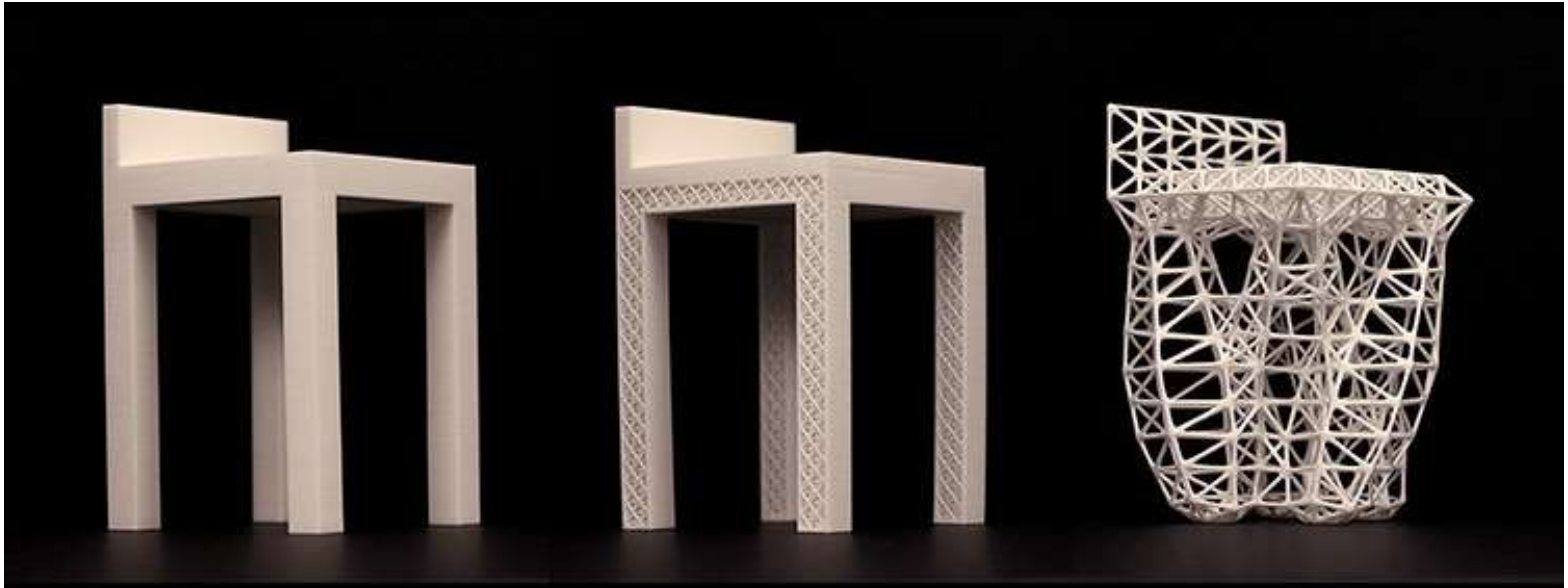
Accelerating Technology

“We won’t recognize our profession in the next 10 years...and honestly, I said 10 years so it wouldn’t scare you. It will probably be unrecognizable in five.”

Mark Melancon
President and CEO
American Institute of CPAs

CPA Evolution

- Must adapt quickly due to the technological disruptions in areas such as data analytics, robotics, artificial intelligence and more
- Technological and analytical expertise are essential to performing assurance work, as well as the other services that are currently, or will be in the future, core to accounting.
- Sustaining the profession and continued public protection require rethinking initial licensure requirements
- The profession must be redesigned to attract individuals with technological and analytical expertise



MODEL 1
Solid bars
Traditional design
Weight:
10.3 kilograms
Displacement:

MODEL 2
Uniform lattice
Smart design with ALM
Weight:
4.1 kilograms
Displacement:

MODEL 3
Evolved lattice
Evolutionary design with ALM
Weight:
2.9 kilograms
Displacement:

“While no one technology will completely alter the architect’s role,...three technologies will have the greatest impact on the profession: generative design, computational analysis, and automation.”

--National Council of Architectural Registration Boards

Faster, cheaper more democratic medicine?

- Robotic drill reduces brain surgery procedure from 2 hours of complex hand drilling to 2.5 minutes
- Fewer infections, faster recovery and lower costs
- Democratizes health care
- Physicians guiding the process but not doing the work

--Neurosurgical Focus, University of Utah

PRESS RELEASES

AMA passes first policy recommendations on augmented intelligence

JUNE 14, 2018

"Combining AI methods and systems with an irreplaceable planner can address the delivery of great communities for all in a way that outperforms what either can do alone.

But we most forthrightly address challenges in the design, evaluation and implementation as this technology is increasingly integrated into planners' delivery of services to communities, professionals and policymakers?

CHICAGO — The
generated growin
novel challenges
of medicine and a
policy addressing
stakeholders on t

"As technology co
intelligence is use
Jesse M. Ehrenfeld, M.D. M.P.H.. "Combining AI methods and systems with an irreplaceable human clinician can advance the delivery of care in a way that outperforms what either can do alone. But we must forthrightly address challenges in the design, evaluation and implementation as this technology is increasingly integrated into physicians' delivery of care to patients."

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t for physicians
patient rights
Join the AMA today

A.I. Is Doing Legal Work. But It Won't Replace Lawyers, Yet.

James Yoon, a partner at Wilson Sonsini Goodrich & Rosati in Palo Alto, Calif., says people are willing to pay for his experience. "What clients don't want to pay for is any routine work."
Jason Henry for The New York Times

How is technology changing the way planners work?

- Data collection, analysis, monitoring, and evaluation (big data, crowdsourcing apps, drones, AI, sensors)
- Visualization (VR, AR)
- Community engagement (crowdsourcing apps, public engagement platforms)

Tools

Skillset

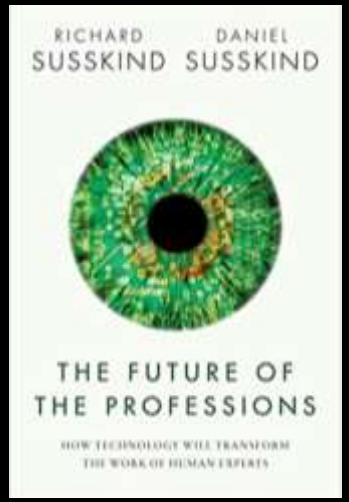
- Soft skills (repetitive work vs. experience-based decisions, facilitator and collaborator, public interest, problems first)
- Continuing education vs. continuous education
- New jobs for planners (AI data trainer, planning ethicist)

Methodologies

- Design thinking
- Agile methods
- Adaptive design / planning
- Testing and fail fast (sandbox vs. living lab)

Involved Disciplines

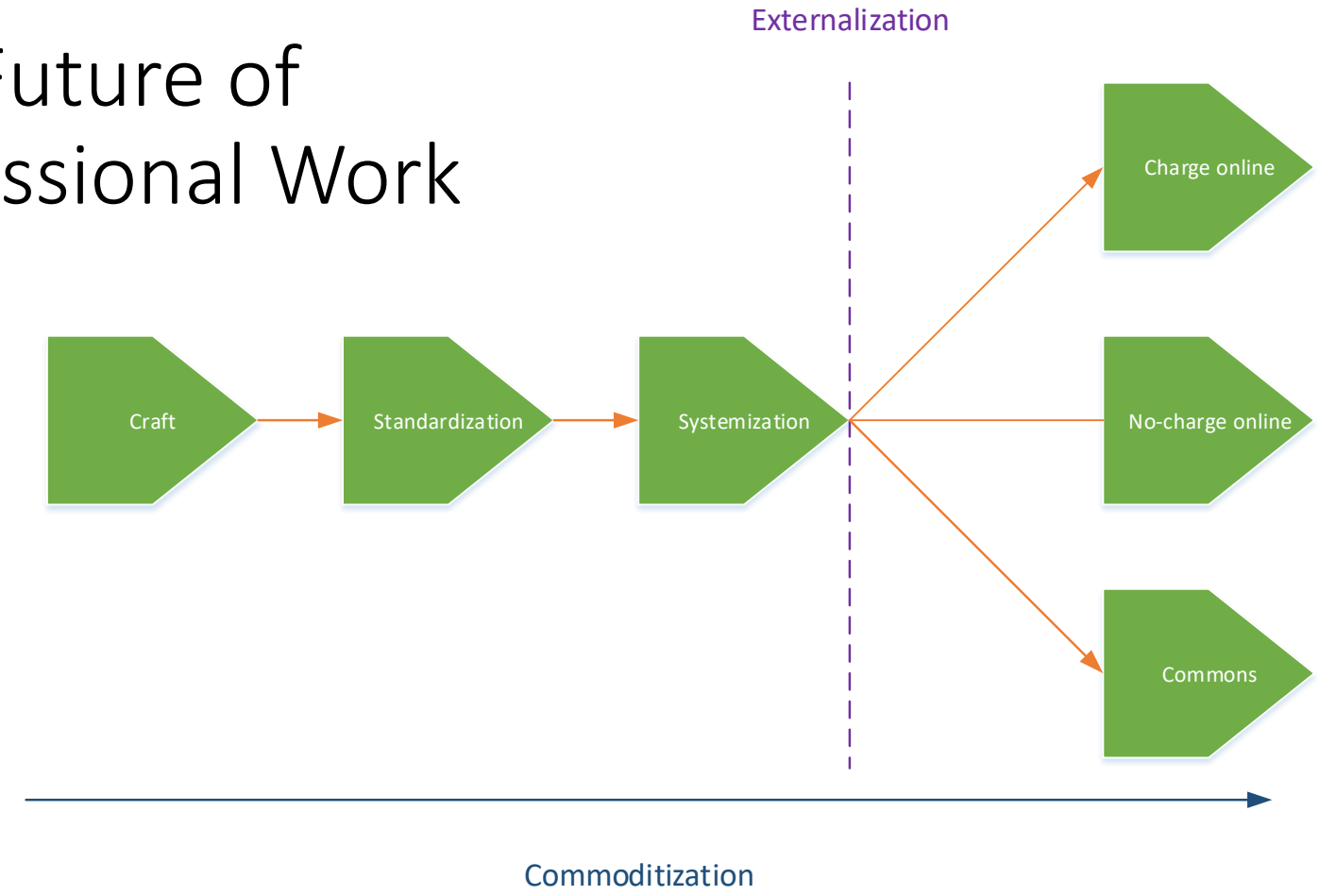
- ICT-experts
- Data analyst
- Data security specialist
- Digital inclusion manager



In the long run we will neither need nor want professionals to work in the way they did in the 20th Century and before

Increasingly capable machines, operating on their own or with non-specialist users, will take on many tasks that have been the historic preserve of the professions

The Future of Professional Work

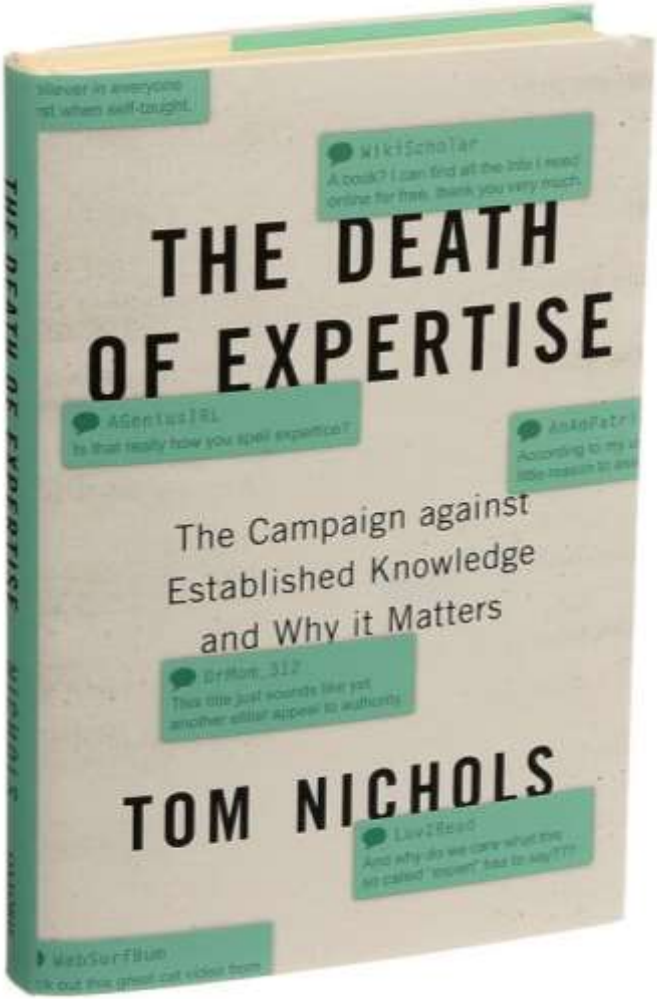


HOW DOES IT MAKE

YOU FEEL?

Rejection of Expertise

“In modern America, policy debates sound increasingly like fights between groups of ill-informed people who all manage to be wrong at the same time.”



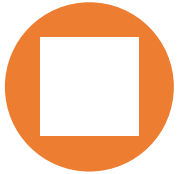
Values win over facts

Dunning-Kruger effect

We want to be liked

Confirmation bias

Mathematical and scientific illiteracy



Education, journalism and the Internet

ECONOMY | U.S. ECONOMY

Millions of Young People Shut Out of the Housing Market

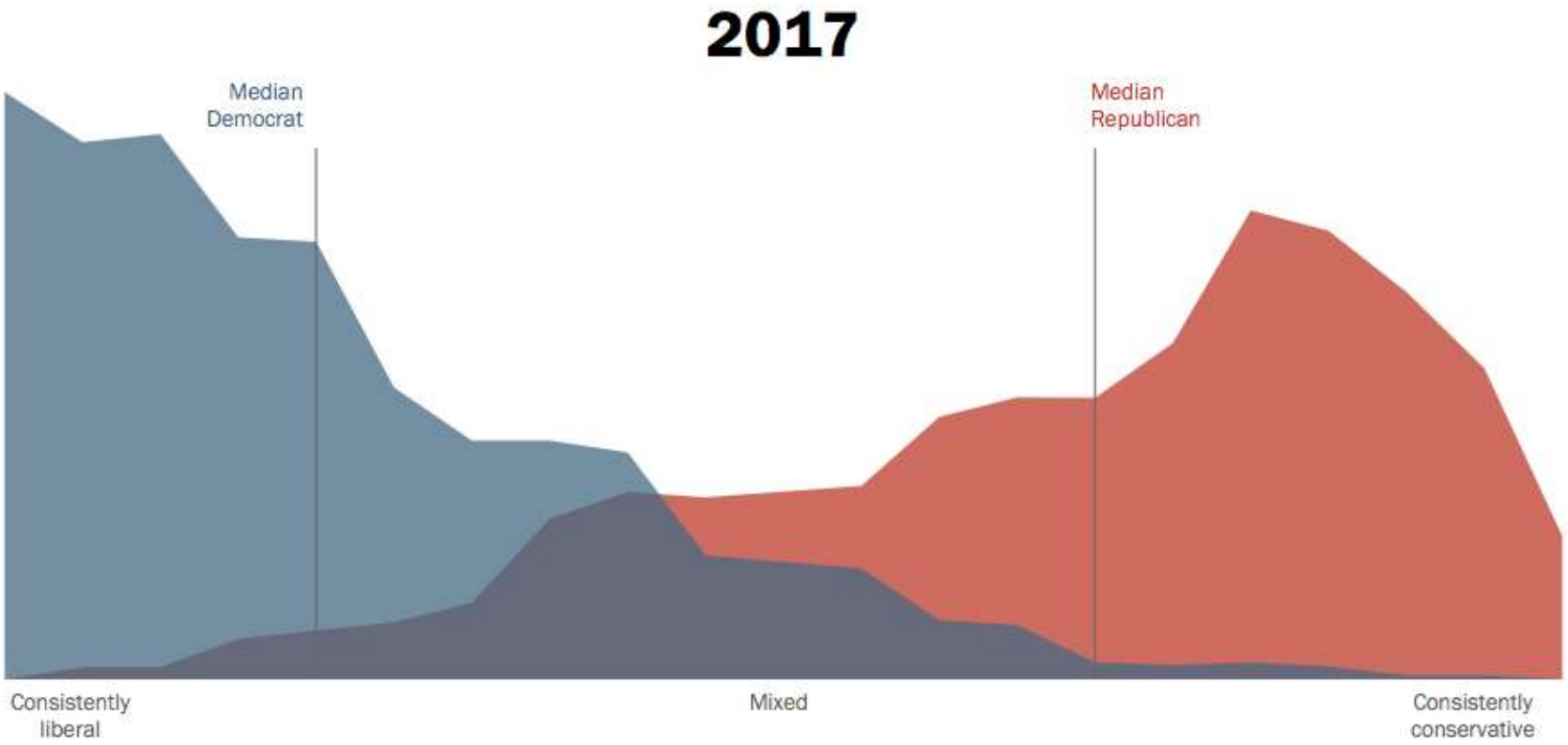
Number of first-time U.S. home buyers below historical average

So far this year, first-time buyers represented about 38% of the market, greater than the historical average of 35%, according to Genworth. Some two million first-timers purchased homes last year, or 37% of the market.

“We’ve had a very strong surge in first-time home buyers,” said Tian Liu, chief economist at Genworth.

FACEBOOK
ZUCKERBERG:
WE'RE INCREASING TRANSPARENCY ON ADS
ANNOUNCES NEW MEASURES TO "PROTECT ELECTIONS"
CBS

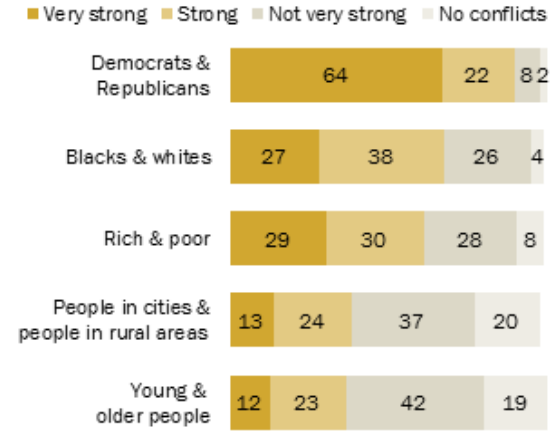
Splintered Society



Source: Pew Research Center

Public sees strong conflicts between many groups – especially partisans

% who say there are ____ conflicts between each pair in America today



Notes: Don't know responses not shown.
Source: Survey of U.S. adults conducted Nov. 29-Dec. 4, 2017.

PEW RESEARCH CENTER

55% of Democrats and 49% of Republicans said they are “afraid” of the other party.

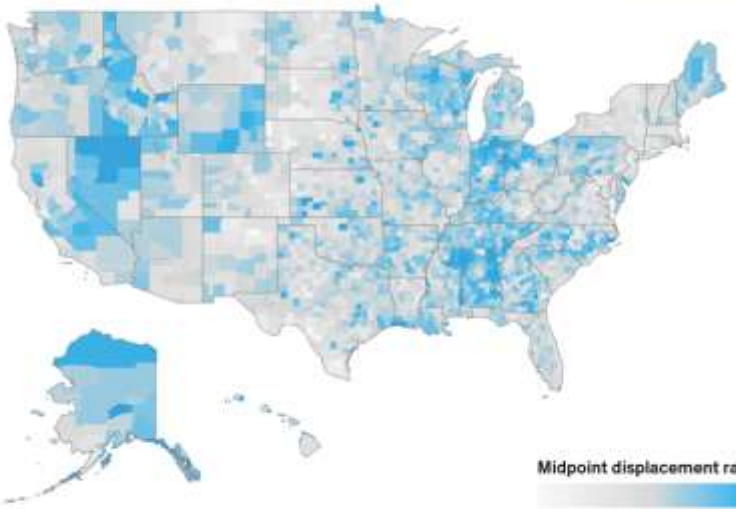
--Pew Research Center

Interactive

Displacement and net job growth could be highly uneven across the United States.

Estimated share of displacement by county[1] in 2030, %

Jobs displaced | Jobs created



Midpoint displacement rate, %

18 — 33

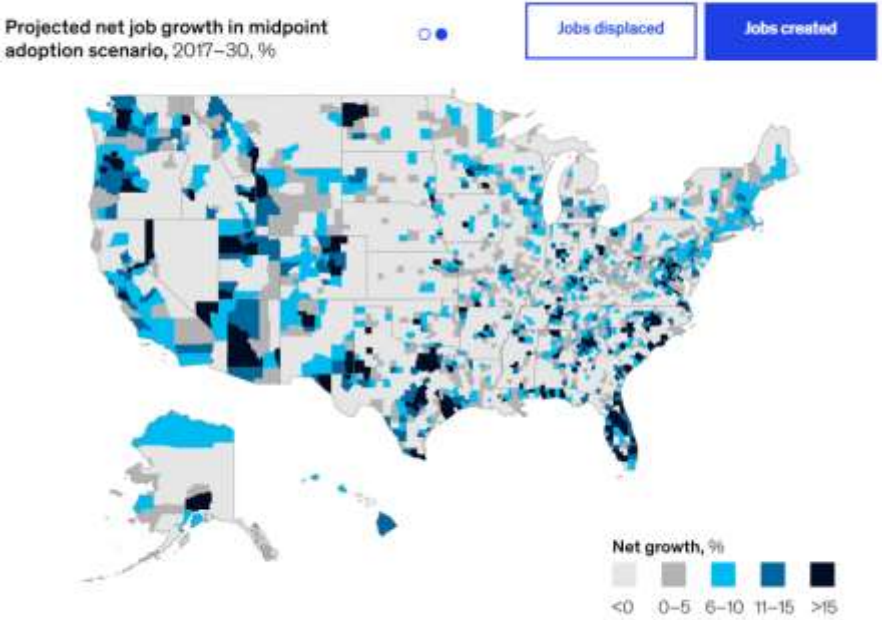
[1]Total jobs lost divided by total jobs in 2030, in midpoint adoption scenario.
Source: McKinsey Global Institute analysis

McKinsey & Company

Interactive

Displacement and net job growth could be highly uneven across the United States.

Projected net job growth in midpoint adoption scenario, 2017–30, %



Source: McKinsey Global Institute analysis

McKinsey & Company

Changing Face of America

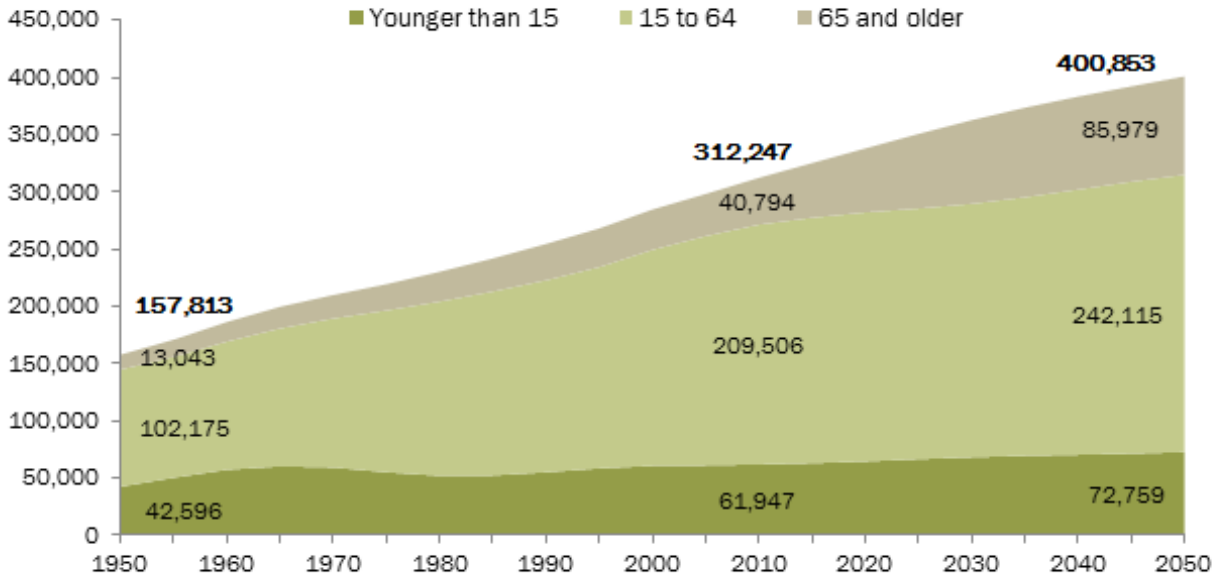
Bigger

Older

More Diverse

Estimates of the U.S. Population, by Age, 1950 to 2050

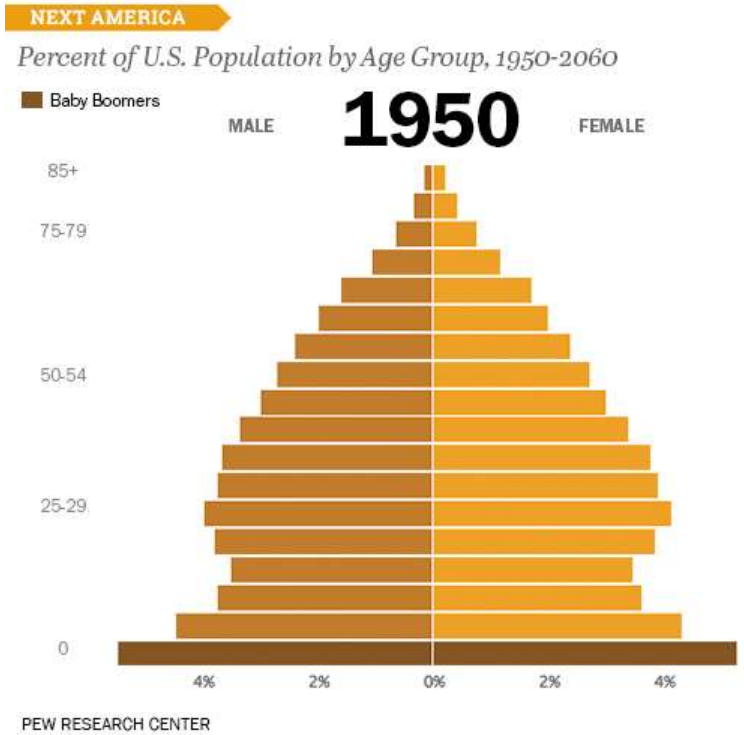
Thousands



Source: United Nations, Department of Economic and Social Affairs, *World Population Prospects: 2012 Revision*, June 2013, http://esa.un.org/unpd/wpp/index.htm

PEW RESEARCH CENTER

Baby Boomers Reshape the Population



The New Workforce

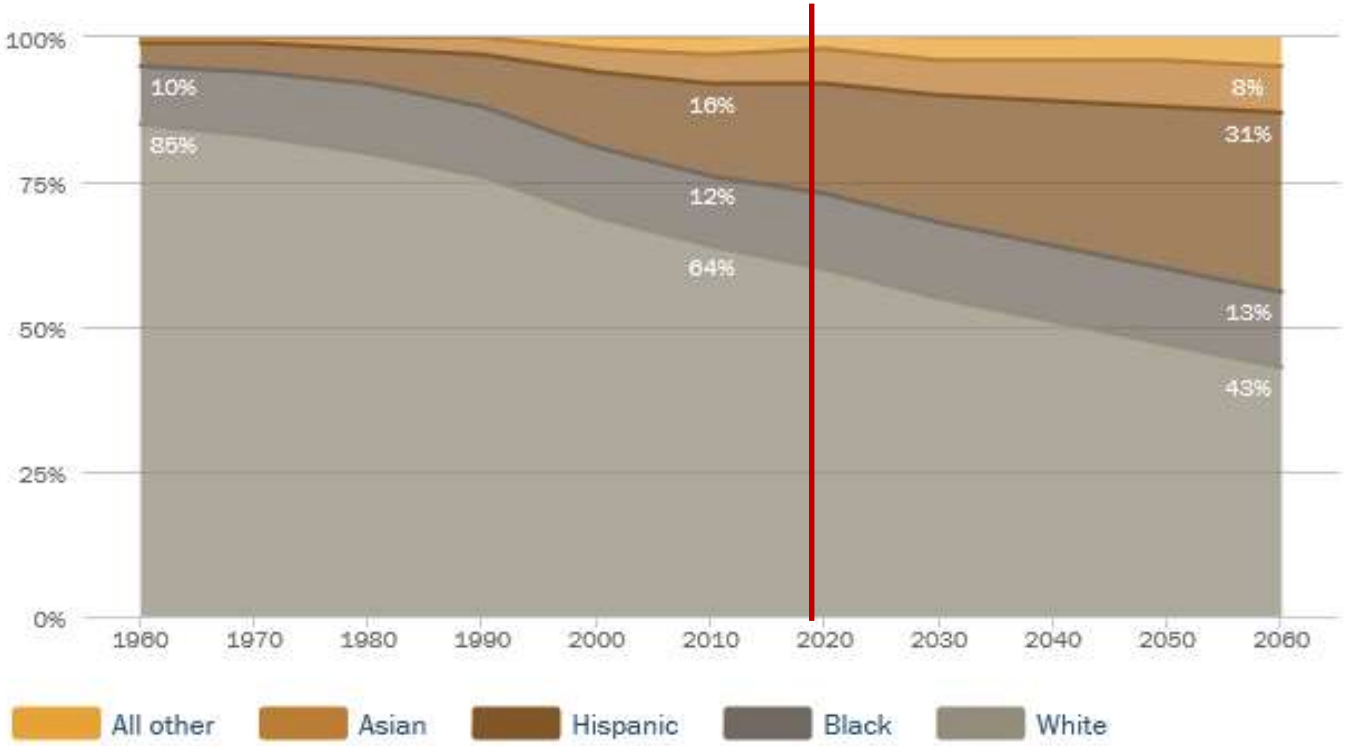
There were twice as many people over 65 in the workforce in 2016 than in 2000

In 2015, Millennials became the largest generation in the workforce

There are currently **five** generations in the workforce

Changing Face of America

Percent of total U.S. population by race and ethnicity, 1960-2060



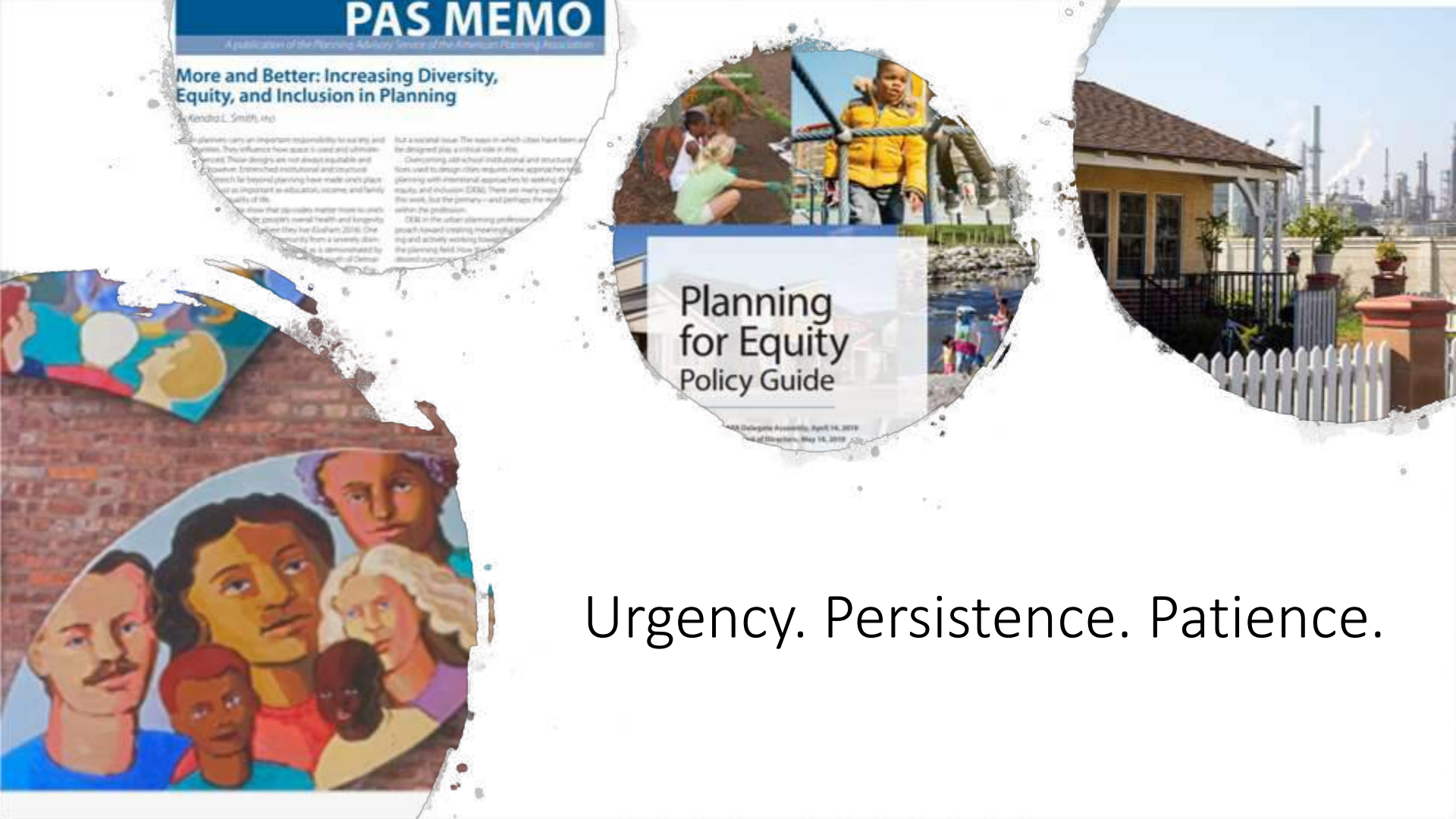
"I skate to where the puck is going to be, not where it has been."
-- Wayne Gretzky

HOW DOES IT MAKE

YOU FEEL?

How is APA Responding?

Getting more, different heads in the game



Urgency. Persistence. Patience.

Practicing Foresight

ANLA™
American Nursery &
Landscape Association

KODAK

BARNES&NOBLE

Algorithmic Politics
Socializing Reshaped
Automating Work
Virtualized Meetings
New Forms of Work
Mentoring 2.0
Declining Trust
Human Machine Cooperation
Philanthropy Reshaped
More Human Humans
Anticipatory Intelligence
Diversity and Inclusion
Personalized AI
Automating Work
Climate Change
New Journal Models
21st Century Guilds
Work Redefined
The Splintered Society
Global Power Shifts
Anticipatory Intelligence
Dark Data Comes to Life
Nichification - Big Data Segmentation
Work Redefined
Sharing Economy
Fast Data
Dark Data Comes to Light
Higher Education 3.0
Empowered Women
Fraying Cybersecurity
American Inequality
Shifting Terrain for Advocacy
Aging World
Bifurcated Workforce
Ethical Consumption
Cartel Capitalism
Human-Machine Cooperation
Microlearning
Blockchain Platforms
Global Power Shifts

Elements of AI

Start course FAQ International

Welcome to the Elements of AI free online course!

Join over 205,000 other people learning about the basics of AI.

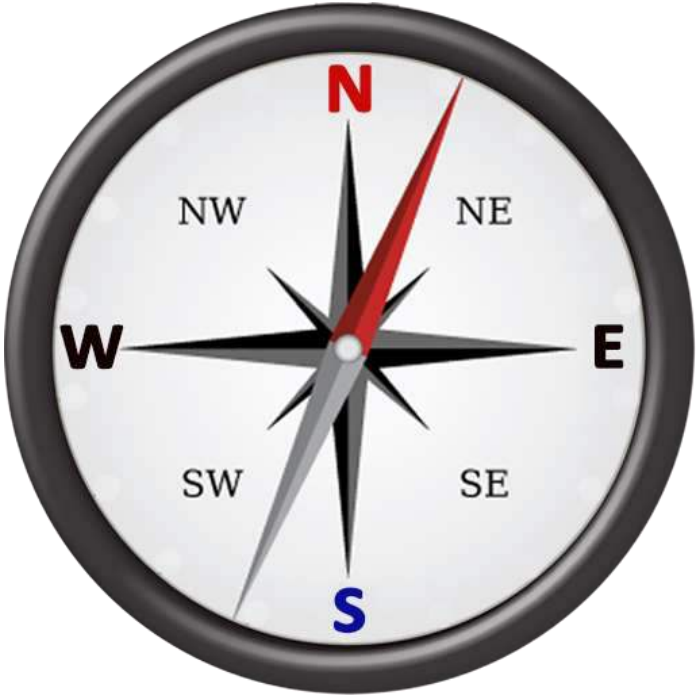
Start the course →

Are you wondering how AI might affect your job or your life?

Do you want to learn more about what AI really means — and how it's created?

Do you want to understand how AI will develop and affect us in the coming years?

Becoming more strategic



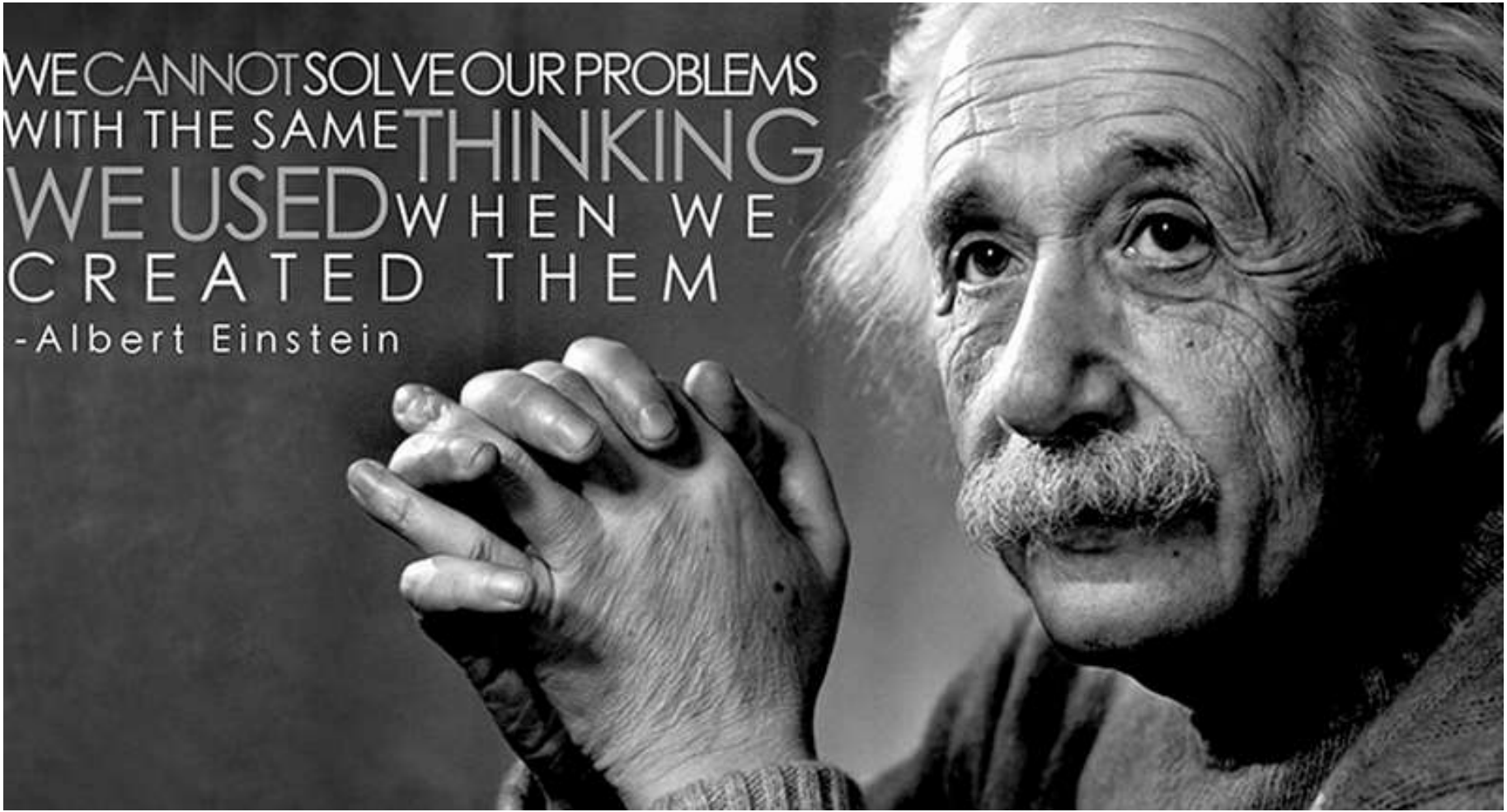
Great Communities for All

Barriers

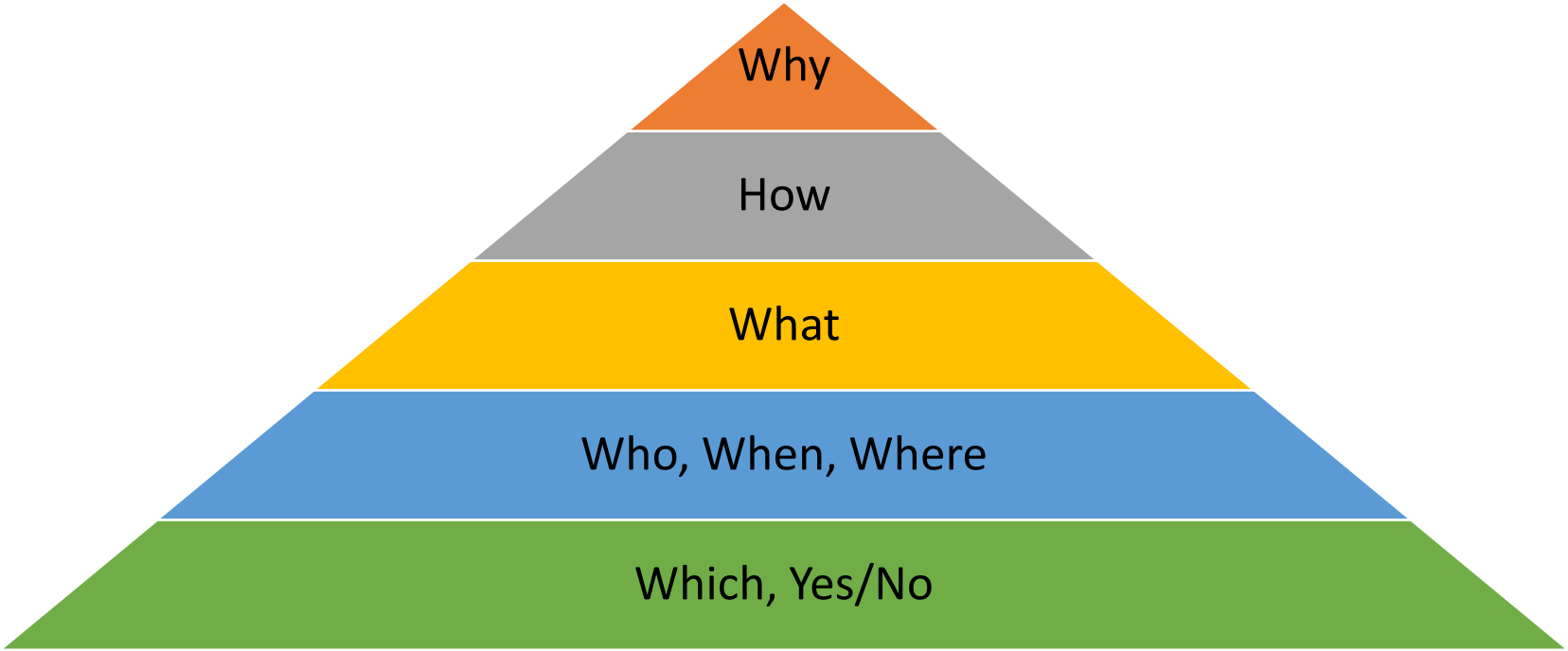
Speed of technological change
Low understanding/trust
Knowledge/skill uncertainty
Resistance to change
Lack of public infrastructure funding

Help planners anticipate and adapt to constant, often disruptive change and create outsized impact

Thinking and acting differently


WE CANNOT SOLVE OUR PROBLEMS
WITH THE SAME THINKING
WE USED WHEN WE
CREATED THEM
-Albert Einstein

Ask more powerful questions



Use Design Thinking

FRAME A QUESTION

Identify a driving question that inspires others to search for creative solutions.

GATHER INSPIRATION

Inspire new thinking by discovering what people really need.

GENERATE IDEAS

Push past obvious solutions to get to breakthrough ideas.

MAKE IDEAS TANGIBLE

Build rough prototypes to learn how to make ideas better.

TEST TO LEARN

Refine ideas by gathering feedback and experimenting forward.

SHARE THE STORY

Craft a human story to inspire others toward action.

IDEO

What can YOU do?

#do1thing

- Learn about AI
- Try asking more powerful questions
- Experiment with design thinking
- Bring somebody different into the conversation or the team

Questions?

APA