

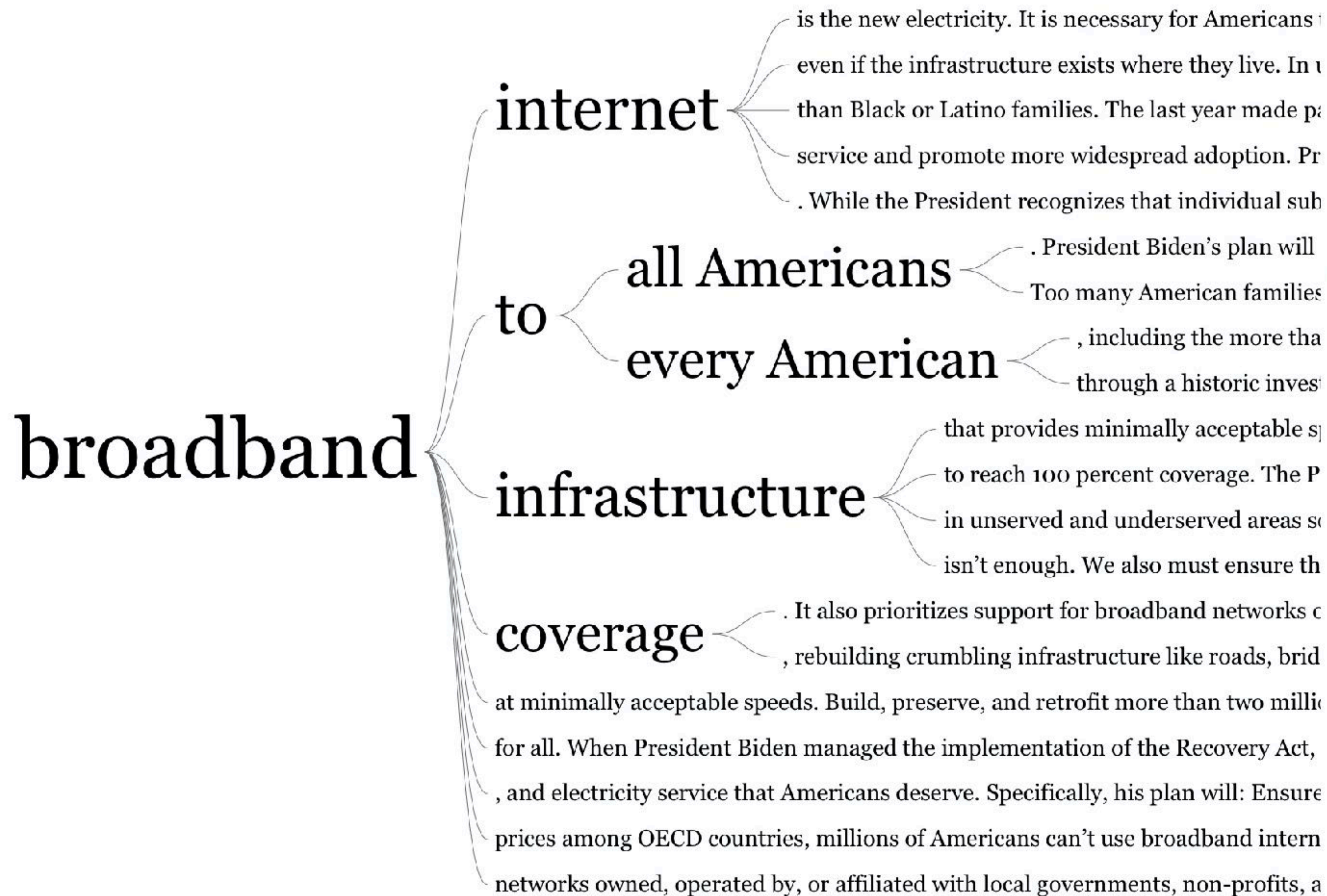
The American Jobs Plan: *A ShapingEDU Broadband Project* Delphi Activity

Ruben R. Puentedura, Ph.D.

The American Jobs Plan

workers manufacturing affordable federal plan
future make United President economic
public union also new calling
funding invest jobs pay investments
American energy water need infrastructure
care investment percent corporations States
including Americans billion Presidents Bidens
communities Congress access Biden
AMERICA build Clean rural country
ensure program create broadband economy development programs

Shift-click to make that word the root.



in America, and millions of families and our economy reaped the benefits. Broadband internet is the new electricity. It is necessary for Americans to do their jobs, to participate equally in school learning, health care, and to stay connected. Yet, by one definition, more than 30 million Americans live in areas where there is no broadband infrastructure that provides minimally acceptable speeds. Americans in rural areas and on tribal lands particularly lack adequate access. And, in part because the United States has some of the highest broadband prices among OECD countries, millions of Americans can't use broadband internet even if the infrastructure exists where they live. In urban areas as well, there is a stark digital divide: a much higher percentage of White families use home broadband

Shift-click to make that word the root.

ffordable, reliable,

JRE, A RENEWED ELECTRIC GRID, AND

of \$100 billion. That investment will: Build

d areas so that we finally reach 100 percent

erican, including the more than 35 percent of rural Americans who lack access to

asportation, safe water, affordable housing, healthy schools, clean electricity, and

internet, or experience power outages too often – all while paying more for those

d farm in America, and millions of families and our economy reaped the benefits.

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ach 100 percent coverage. The President's plan prioritizes building "future proof"

reach 100 percent high-speed broadband coverage. It also prioritizes support for

en playing field with private providers, and requiring internet providers to clearly

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ust ensure that every American who wants to can afford high-quality and reliable

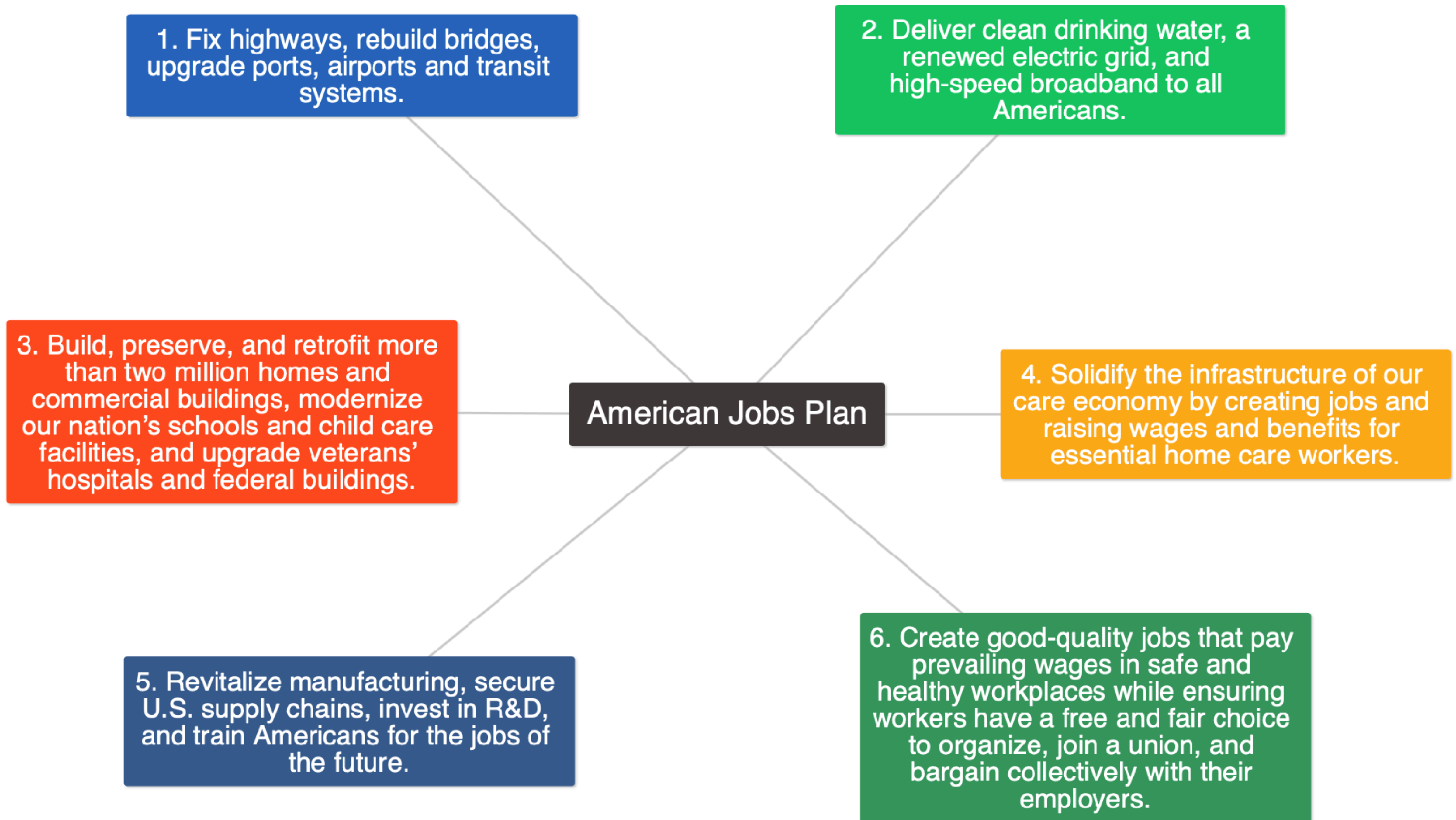
plan invests in rural and Tribal communities, including by providing 100 percent

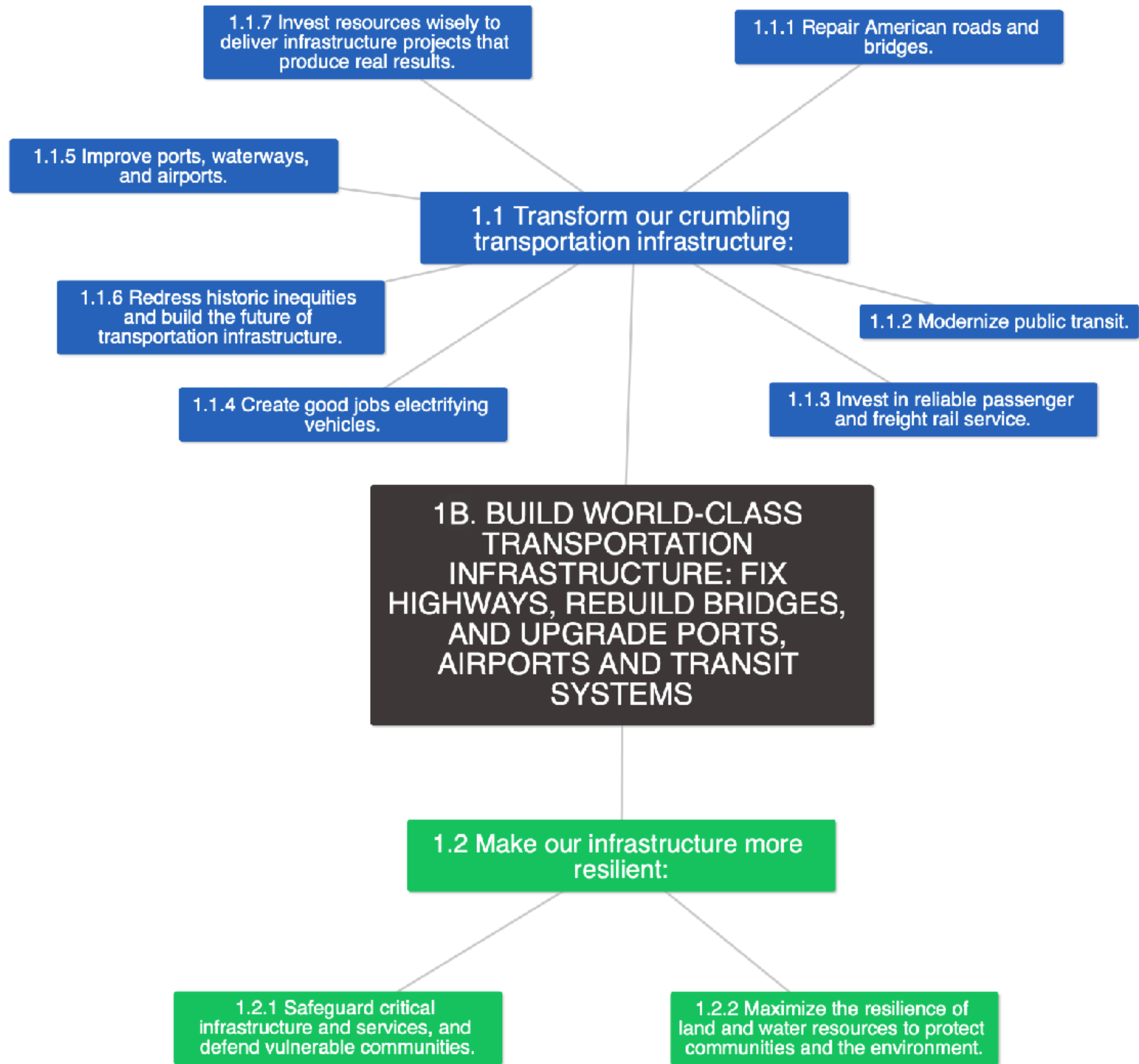
high-speed

broadband

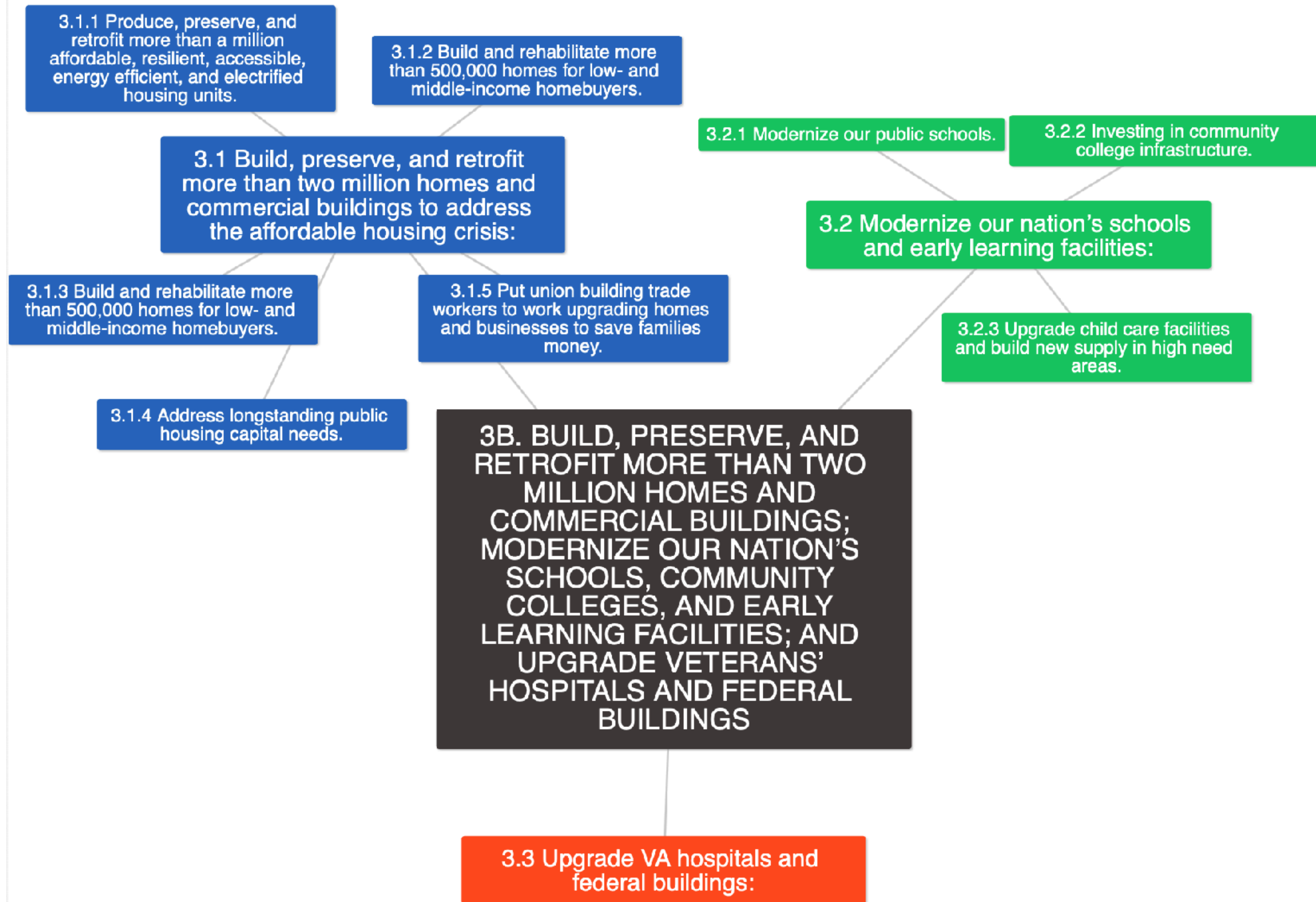
systems, improving the health of our country's children and communities of color. It will put hundreds of thousands of people to work laying thousands of miles of transmission lines and capping hundreds of thousands of orphan oil and gas wells and abandoned mines. And, it will bring affordable, reliable, high-speed broadband to every American, including the more than 35 percent of rural Americans who lack access to broadband at minimally acceptable speeds.

Build, preserve, and retrofit more than two million homes and commercial buildings, modernize our nation's schools and child care facilities, and upgrade veterans' hospitals and federal buildings. President Biden's plan will create good jobs building, rehabilitating, and retrofitting affordable.





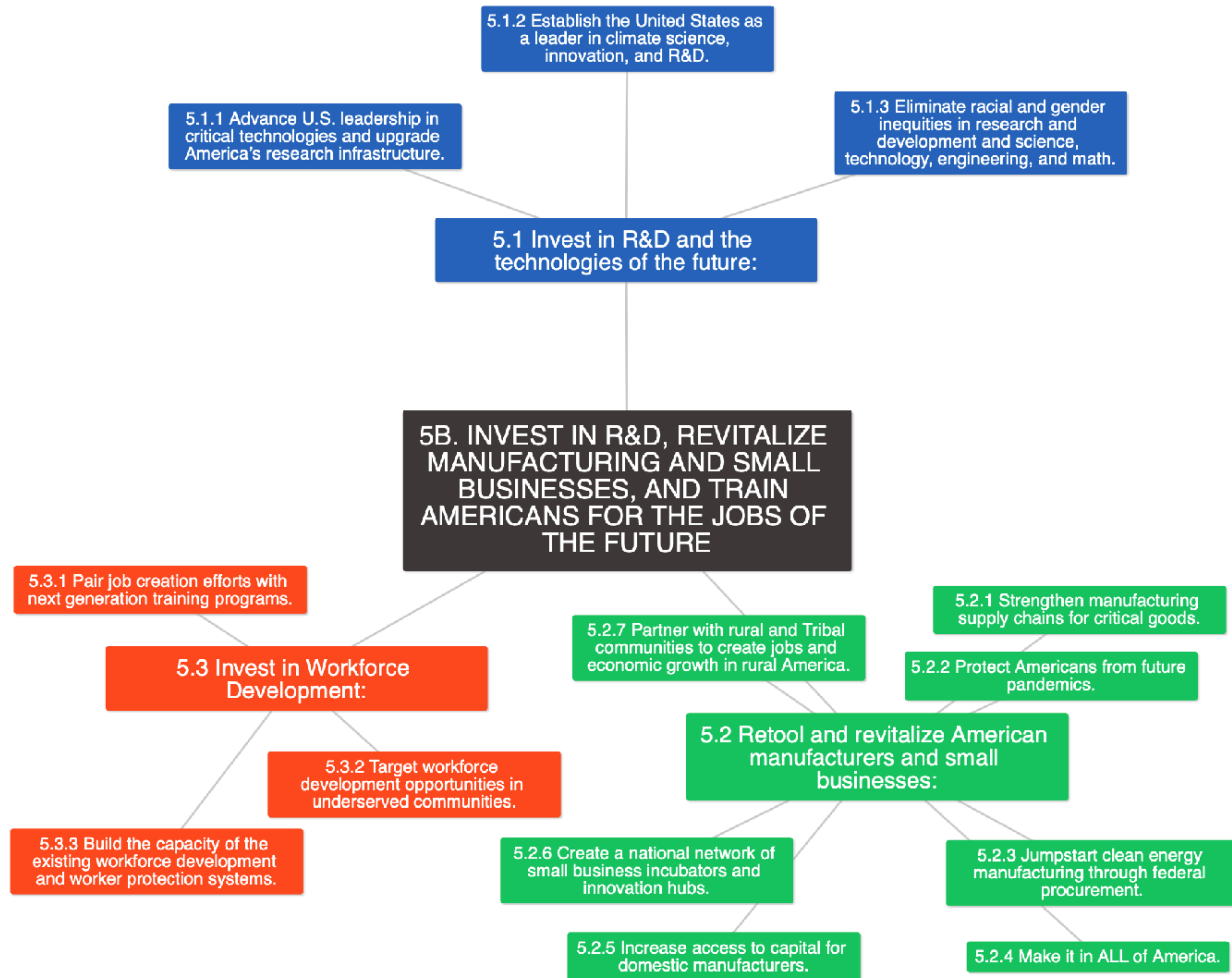




4.0.1 Expand access to long-term care services under Medicaid.

**4B. SOLIDIFY THE
INFRASTRUCTURE OF OUR
CARE ECONOMY BY CREATING
JOBS AND RAISING WAGES
AND BENEFITS FOR ESSENTIAL
HOME CARE WORKERS**

4.0.2 Put in place an infrastructure to create good middle-class jobs with a free and fair choice to join a union.



6.0.1 Empower Workers.

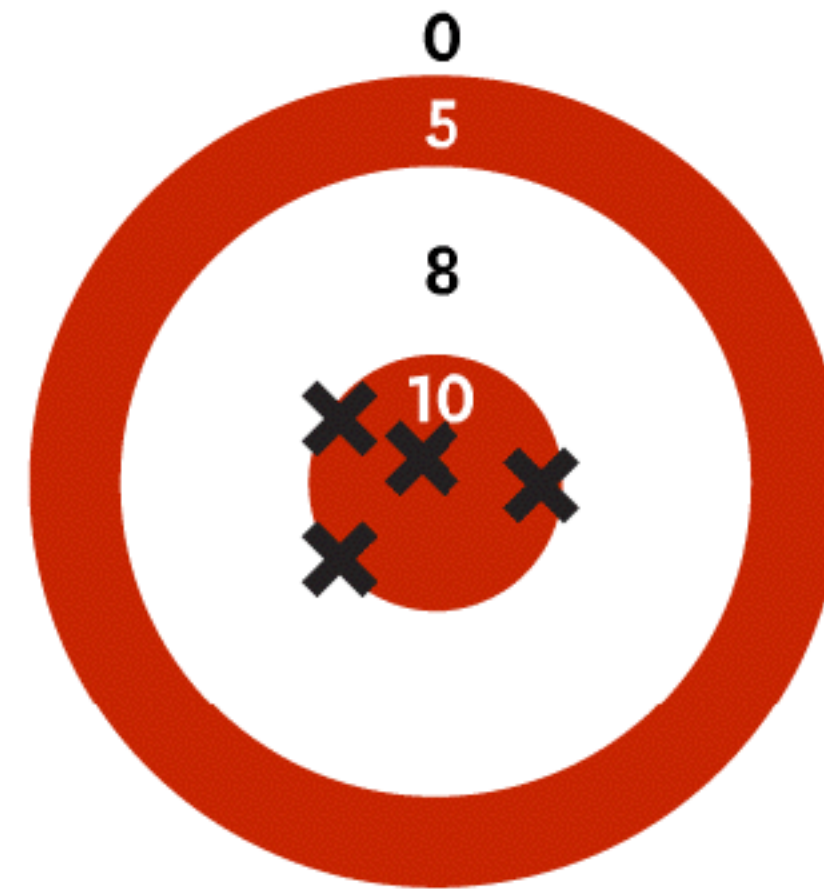
**6B. CREATE GOOD-QUALITY
JOBS THAT PAY PREVAILING
WAGES IN SAFE AND HEALTHY
WORKPLACES WHILE
ENSURING WORKERS HAVE A
FREE AND FAIR CHOICE TO
ORGANIZE, JOIN A UNION, AND
BARGAIN COLLECTIVELY WITH
THEIR EMPLOYERS**

6.0.2 Create good jobs.

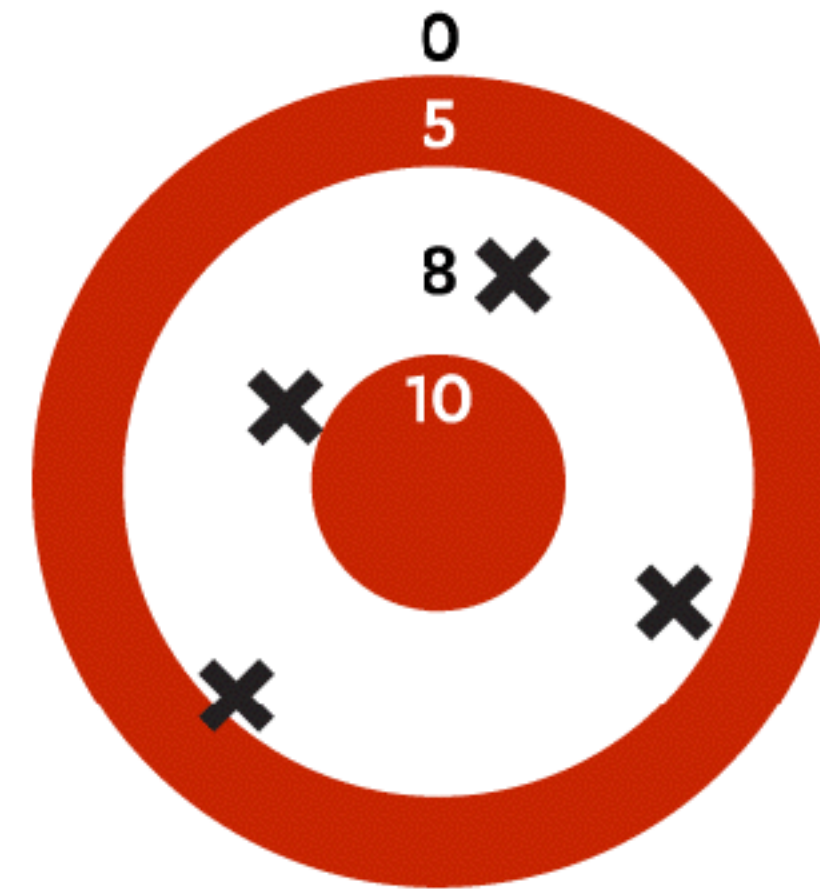
6.0.3 Protect workers.

The Modified Delphi Process

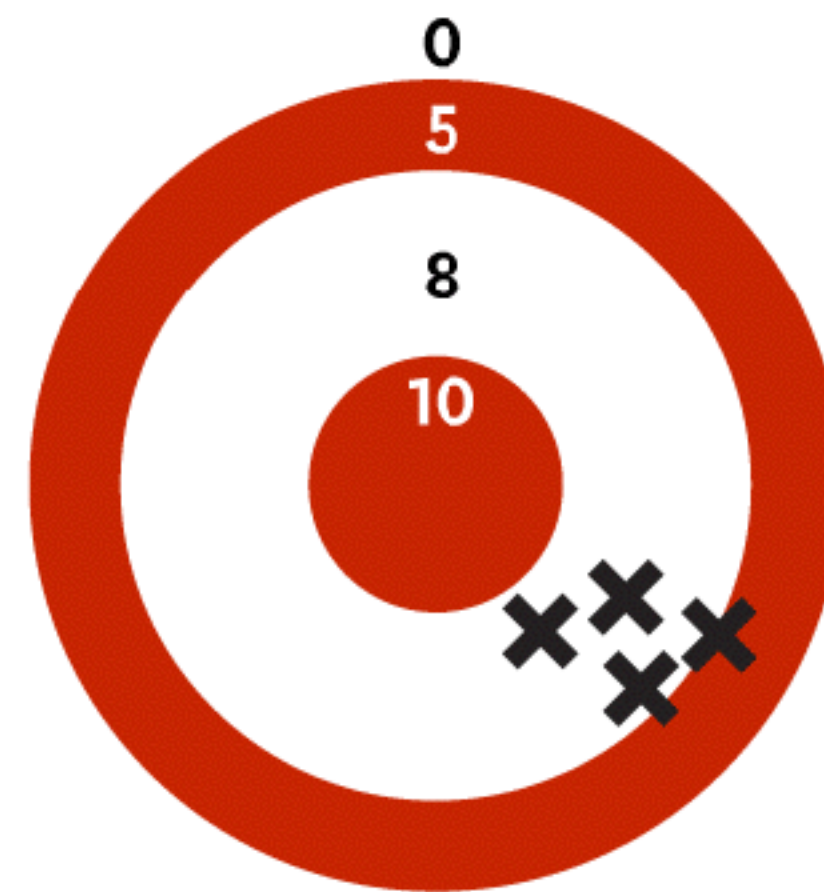
How Noise and Bias Affect Accuracy



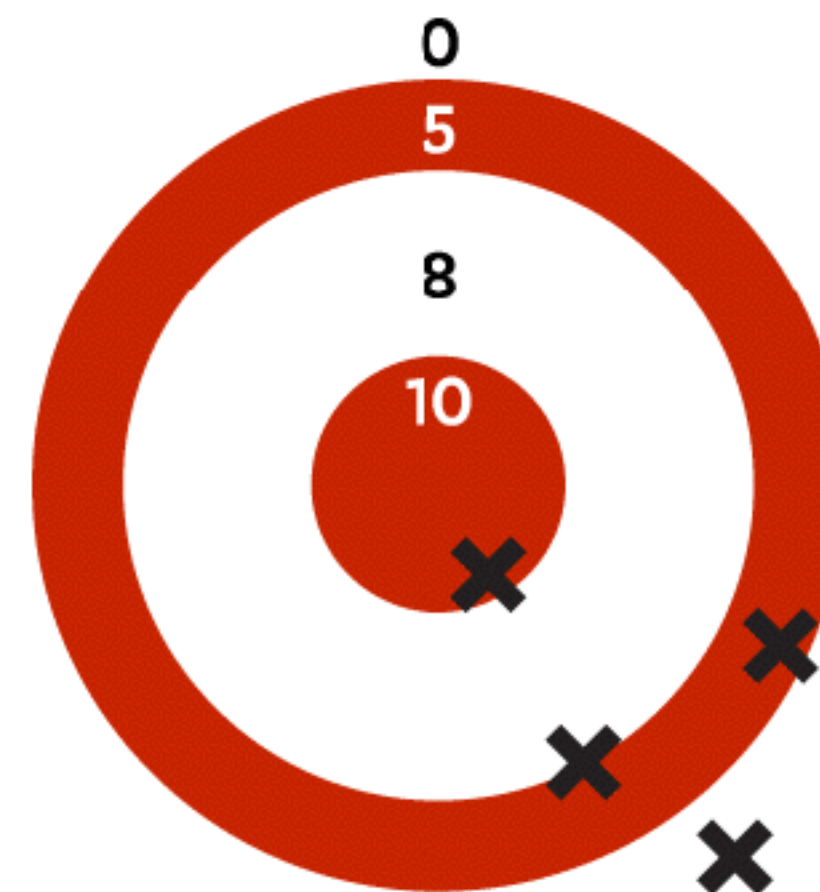
A. Accurate



B. Noisy



C. Biased

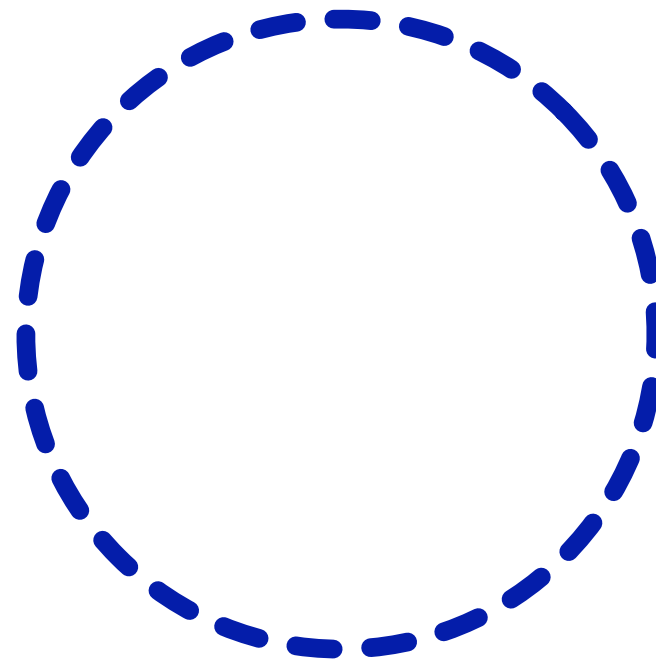


D. Noisy and biased

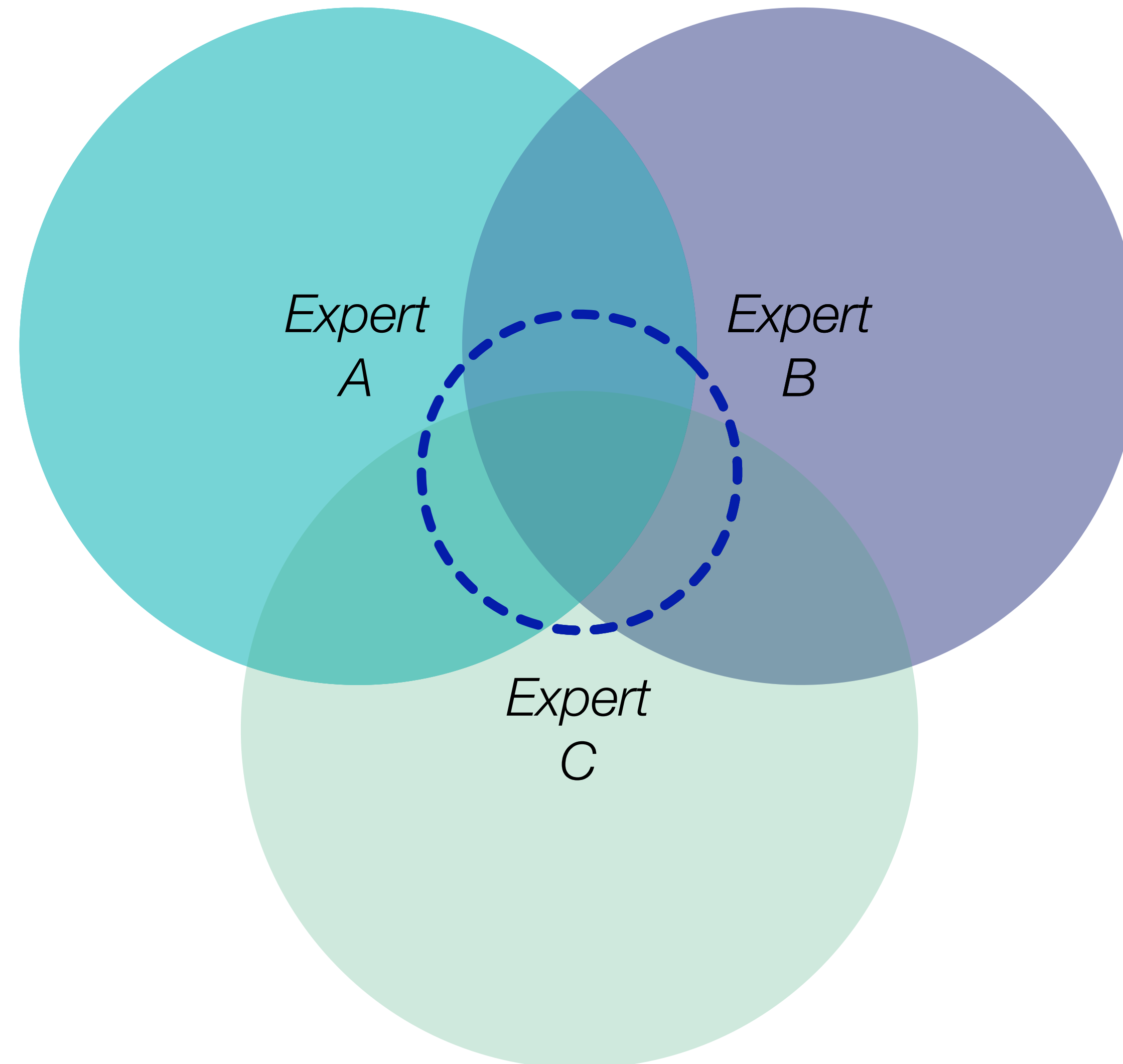
SOURCE DANIEL KAHNEMAN,
ANDREW M. ROSENFELD,
LINNEA GANDHI, AND TOM BLASER
FROM "NOISE," OCTOBER 2016

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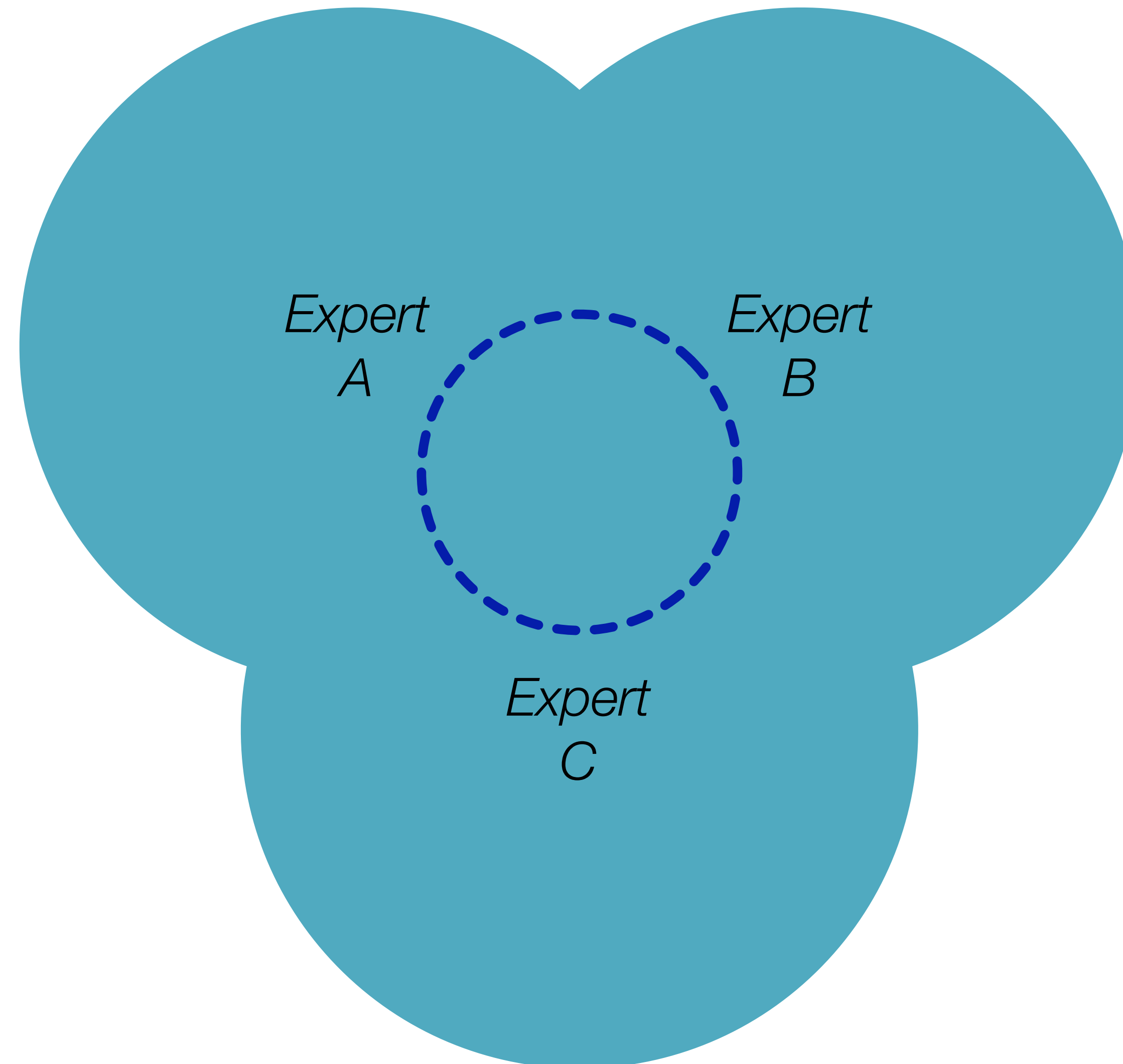
Wanted: the Relevant Knowledge



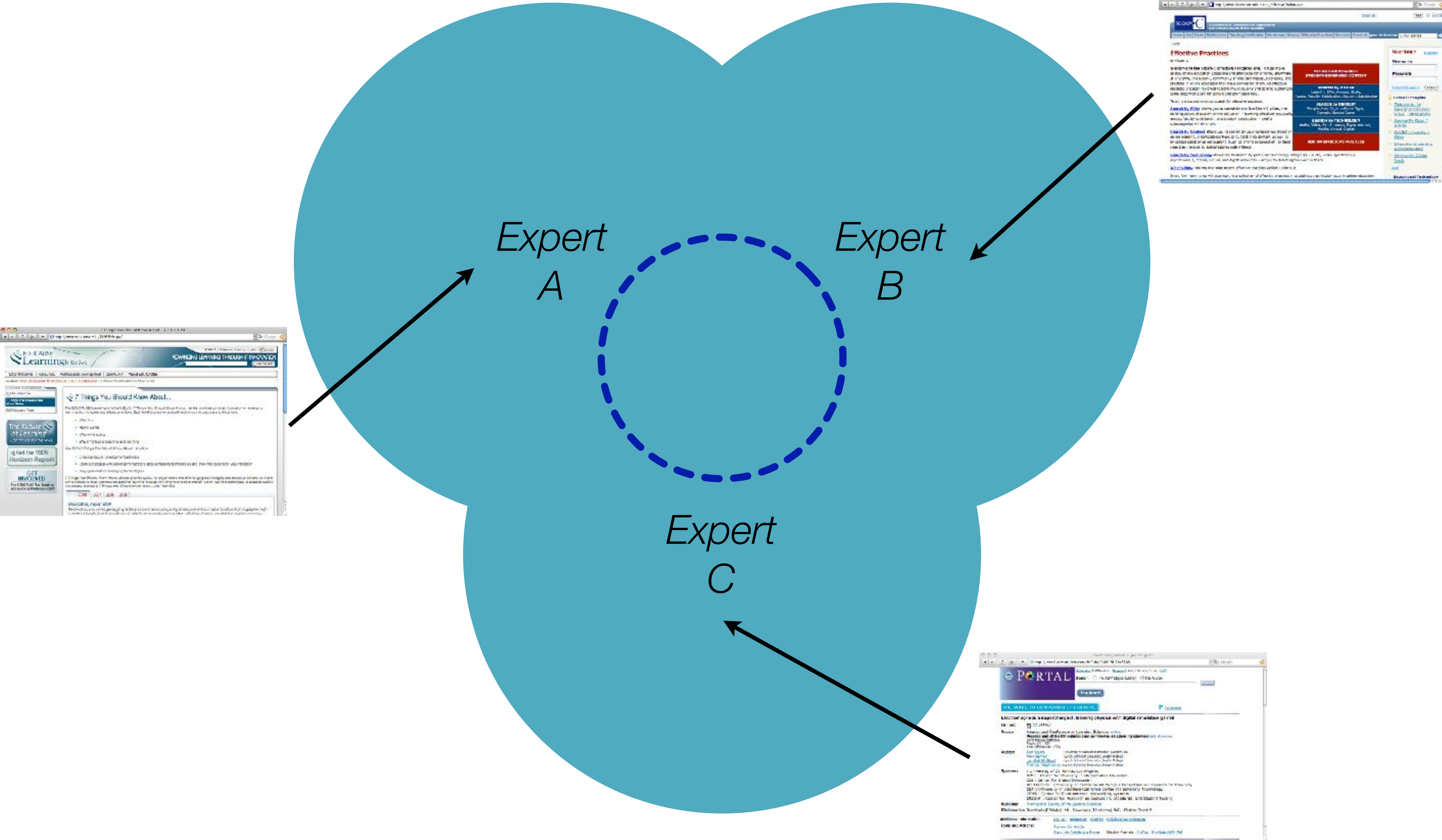
Stage 1: Seeding the Field



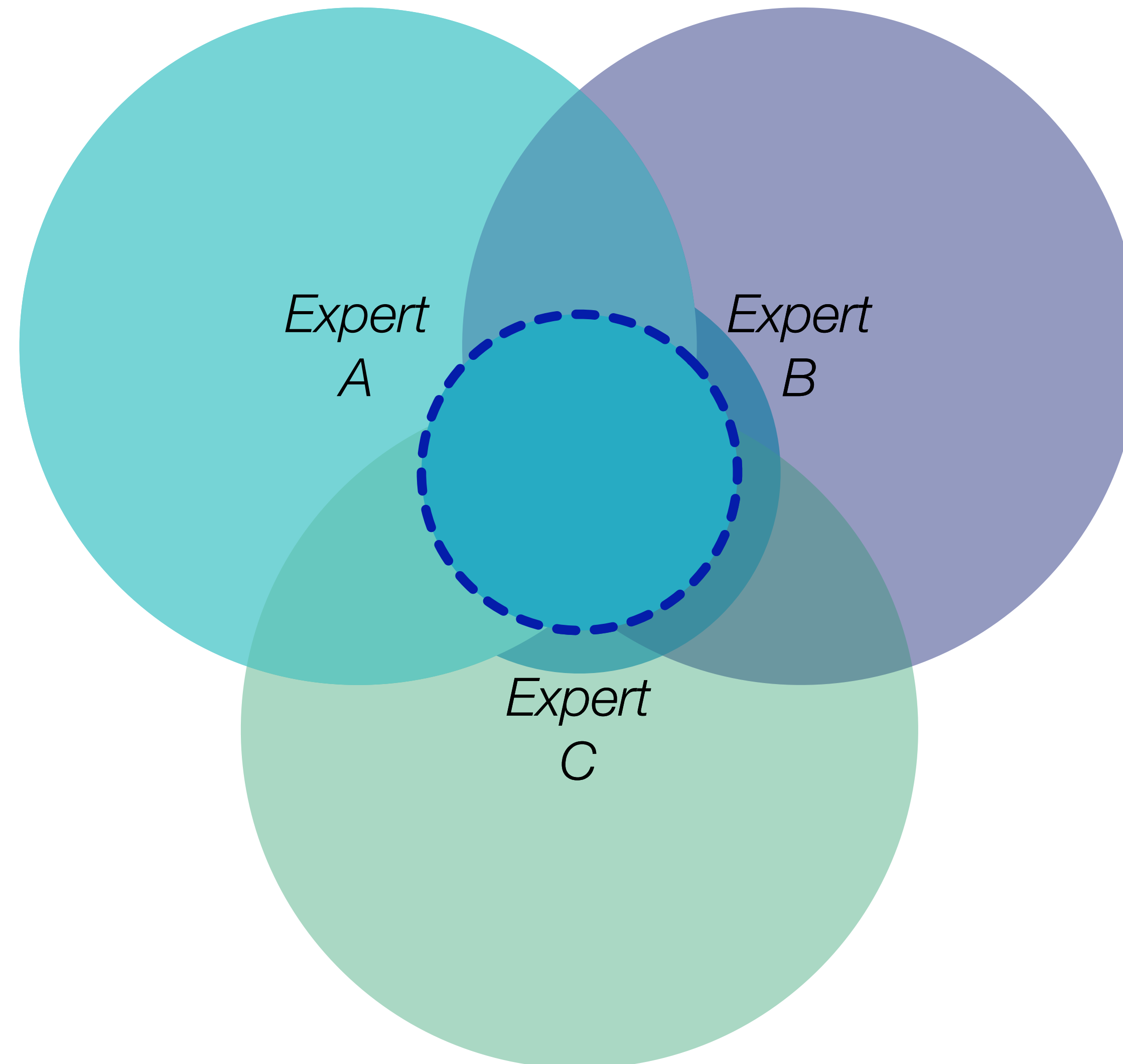
Stage 2: Aggregating the Replies



Stage 3: Informing the Process



Stage 4: Winnowing Down the Results



The First Round Voting Method

- Every participant gets a number of “tokens” to distribute among their preferred replies
- The number of tokens T is determined by the number of replies, according to the following formula:

$$\# \text{ of tokens} = \sqrt{\# \text{ of replies}}$$

- A participant can distribute their tokens any way they want – for instance, if a participant got 7 tokens, they could:
 - Put 1 token on each of 7 different replies
 - Put all 7 tokens on one reply
 - Put 2 tokens on one reply, 4 tokens on a second reply, and 1 token on a third reply
 - ...
- Voting is private
- The top T replies will be selected for the second round of voting

The Second Round Voting Method

- In this round, every participant gets exactly three tokens to distribute among their preferred replies
- As in the previous voting round, a participant can distribute their tokens any way they want – they could:
 - Put 1 token on each of 3 different replies
 - Put all 3 tokens on one reply
 - Put 2 tokens on one reply, and 1 token on a second reply
- As before, voting is private

Resources

- **The American Jobs Plan:**

- Online at <https://www.whitehouse.gov/american-jobs-plan/>

- **Jason Davies' Tools for Text Analysis:**

- *Word Cloud Generator:* <https://www.jasondavies.com/wordcloud/>
- *Word Tree:* <https://www.jasondavies.com/wordtree/>

- **The Delphi Method:**

- Harold A. Linstone and Murray Turoff (Eds.) *The Delphi Method: Techniques and Applications*. Online at <https://web.njit.edu/~turoff/pubs/delphibook/index.html>

- **Noise and Bias:**

- Kahneman, Daniel, et al. "Noise: How to Overcome the High, Hidden Cost of Inconsistent Decision Making." Online at <https://hbr.org/2016/10/noise>
- Kahneman, D., Sibony, O., & Sunstein, C. R. (2021). *Noise: a flaw in human judgment*. Little, Brown Spark.