

Agile on the Edge

Building Projects with Cutting Edge
Technology Using Agile Methodology

@rosalinekarr

Sponsored by 
Carbon Five

The Problem



How Do We Navigate Unexplored Territory?



**Where do we start when there's
no clear path forward?**

A top-down view of a person sitting on a bed. They are wearing a grey sweater and blue denim jeans with a tear at the knee. In front of them is a silver laptop with a Windows logo and a red sticker. To the left is a calendar for August and September with a blue sticky note that says 'TO DO LIST'. To the right is an open book with text and a yellow sticky note. The person's hands are resting on the laptop and the book.


How do we dedicate time to research and planning without losing velocity?

A large octopus with pinkish-purple suckers is the central focus, positioned in an aquarium. The octopus is surrounded by various fish, including a prominent blue fish in the upper left and another in the upper right. The background features yellow coral and dark rocks. The text "How do we adapt as our understanding improves?" is overlaid in white, bold font across the center of the image.


**How do we adapt as our
understanding improves?**

A person wearing a black cap, a light blue shirt, black pants, and a black backpack with green accents stands at a fork in a forest path. The path on the left is covered in brown autumn leaves and leads uphill, while the path on the right is muddy and leads downhill. The forest is dense with tall trees and green foliage. The text "How Do We Make Hard Decisions?" is overlaid in large white font across the center of the image.

How Do We Make Hard Decisions?

A close-up photograph of a laptop screen displaying a 404 error page. The screen shows the number '404' in large white font, followed by the text 'Hey, the page you were looking for doesn't seem to exist anymore.' and a button labeled 'Back to Unsplash'. The laptop is a MacBook Pro, with the keyboard visible in the foreground. The background is a blurred image of a person's face.

How do we answer questions that have never been asked before?

A row of blue corrugated metal water tanks in front of a brick building. The tanks are arranged in a line, receding into the distance. The building is made of red brick and has several windows. The sky is a clear, bright blue. The text is overlaid in the center of the image.

How do we avoid duplicating work when we don't always know what we're working on?

A photograph of ancient ruins, likely the Temple of Bel in Palmyra, featuring several tall, weathered stone columns. The scene is set against a clear blue sky. The foreground shows a sandy area with scattered stone blocks and debris. In the background, a modern city skyline is visible on the left, and some trees and a fence are on the right. A few people can be seen in the distance, providing a sense of scale.

How do we make sure what we've learned isn't lost after we're gone?

Our Solution

Three Erlenmeyer flasks are arranged on a light-colored surface. The flask on the left is filled with a vibrant blue liquid. The central flask is filled with a bright green liquid. The flask on the right is filled with a rich orange liquid. The background is a soft, out-of-focus light gray.

The Scientific Method

(kinda)

The Scientific Method

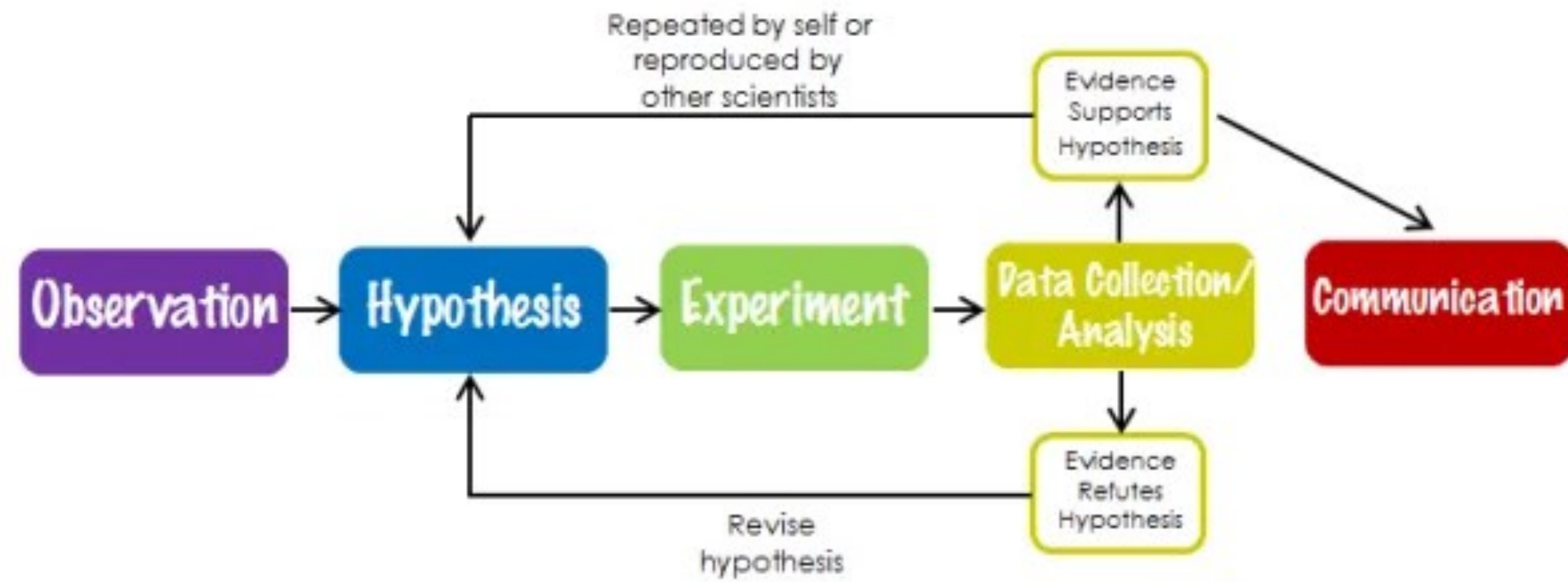
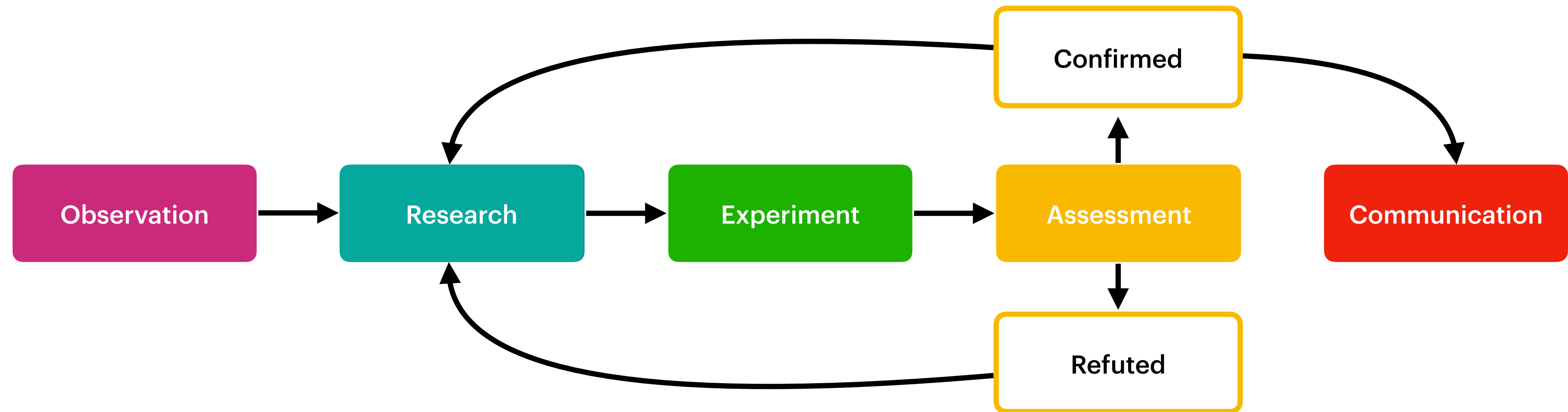


Diagram courtesy of GAVirtualSchool.org

The "Scientific" Method



Research

- We want to learn as much about a subject as possible.
- We want to gather information from a wide range of sources, including everything from highly technical research papers in academic journals to news articles on the wider social context around a subject.
- We want to continue until we have some ideas worth testing.



Photo credit @impatrickt

Experiment

- We want to try out our ideas, write code and build proofs of concept.
- We need to operate under the assumption that anything we create may be thrown away when we're done.
- Our goal **is not** to build something. Our goal **is** to figure out what we need to build.



Assessment

- We want to document what we've discovered.
- We want to share our ideas and discuss them with our team.
- We want consider our next steps and adjust our plan for the project overall as appropriate.



A large glass wall in an office or meeting room is covered with numerous sticky notes. The notes are organized into two rows, each representing a different project or team. The top row has yellow headers for the months: TEMMUZ, AĞUSTOS, EYLÜL, EKİM, KASIM, ARALIK, OCAK, SUBAT, MART. The bottom row has green headers for the same months. The sticky notes are in various colors (orange, blue, yellow, green) and contain handwritten text, diagrams, and small drawings. A large white text overlay is centered on the wall, reading "But where's the Agile?".

But where's the Agile?

Story Writing

- Good stories have a beneficiary, like an end-user or contributing developers.
- Good stories have deliverables, like a new feature, a report or a document.
- Good stories are estimate-able and can be done in a finite amount of time.



Research

- We want to learn as much about a subject as possible.
- We want to gather information from a wide range of sources, including everything from highly technical research papers in academic journals to news articles on the wider social context around a subject.
- We want to continue until we have some ideas worth testing.



Photo credit @impatrickt

Experiment

- We want to try out our ideas, write code and build proofs of concept.
- We need to operate under the assumption that anything we create may be thrown away when we're done
- Our goal **is not** to build something. Our goal **is** to figure out what we need to build.



Assessment

- We want to document what we've discovered.
- We want to share our ideas and discuss them with our team.
- We want consider our next steps and adjust our plan for the project overall as appropriate.

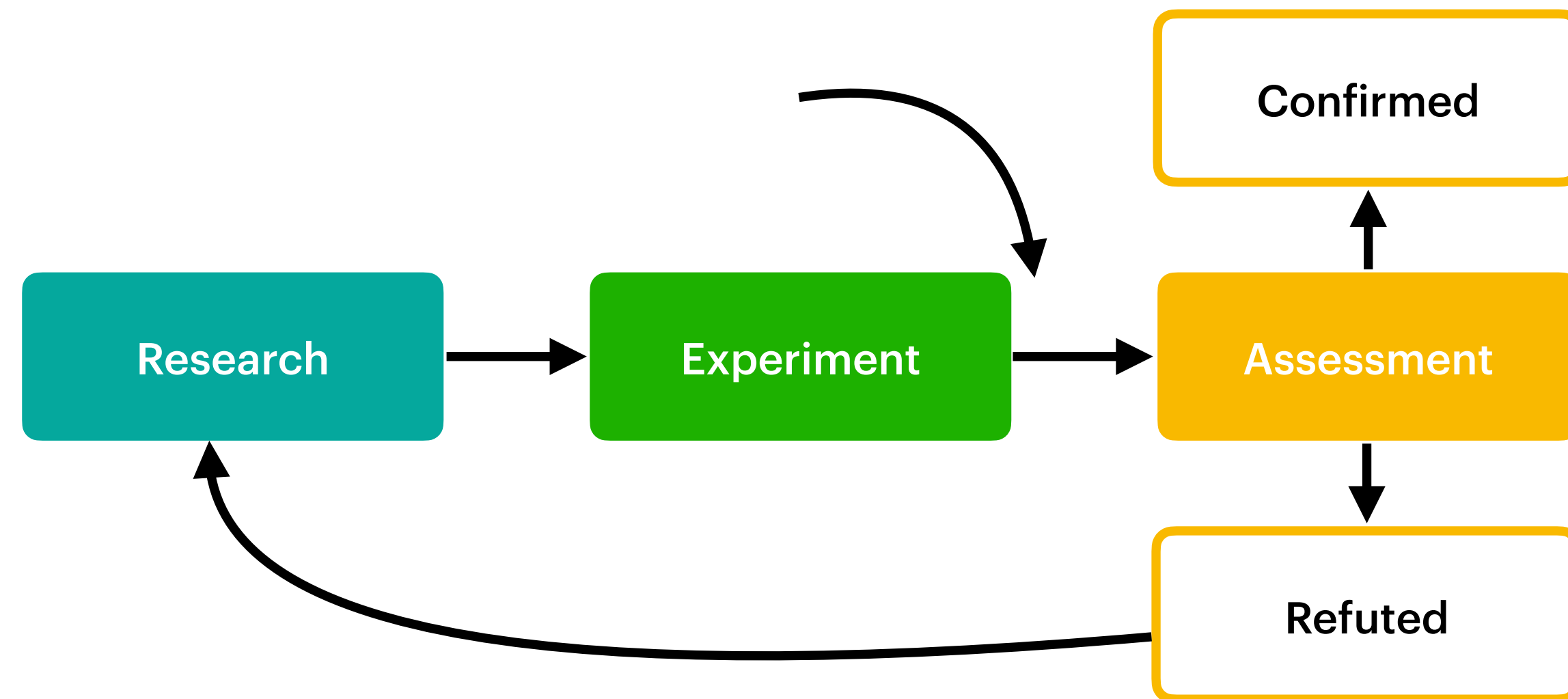


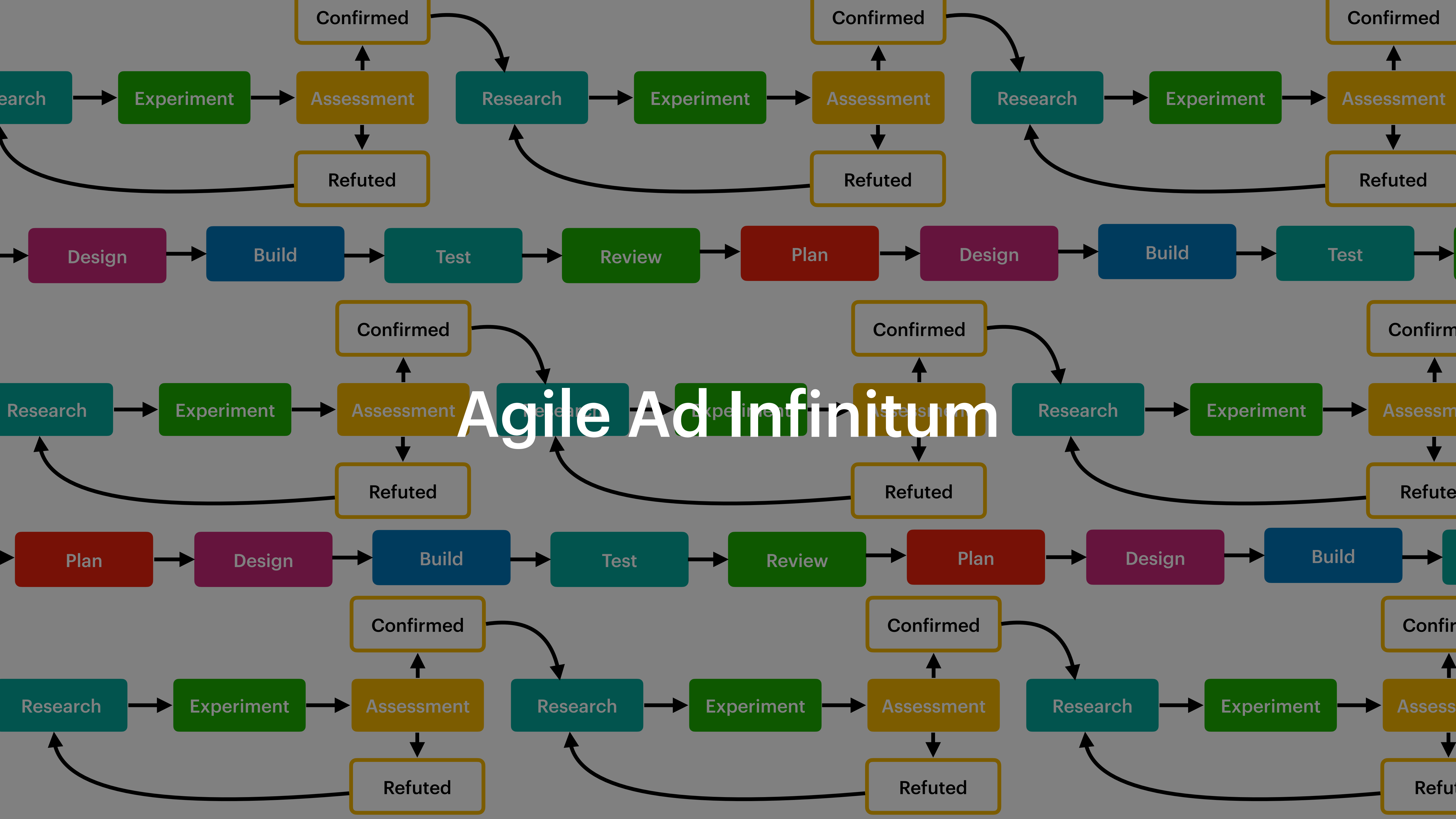
Patterns

- All of these steps can be represented as agile stories
- All of these steps are about unblocking the next stage of development when we don't know what to do next
- All of these stages can be subdivided



The "Scientific" Method







How Do We Navigate Unexplored Territory?

A close-up photograph of a person's hands holding a pair of black-rimmed aviator-style glasses in front of their face. The person's eyes are visible through the lenses, which are slightly out of focus. The background is a blurred, dark greenish-grey color. The text 'Where do we start when there's no clear path forward?' is overlaid in white, bold, sans-serif font across the center of the glasses.

**Where do we start when there's
no clear path forward?**

A top-down view of a person sitting on a bed. They are wearing a grey sweater and blue denim jeans with a tear at the knee. In front of them is a silver laptop with a Windows logo and a red sticker. To the left is a calendar for August and September with a blue sticky note that says 'TO DO LIST'. To the right is an open book with text and a yellow sticky note. The person's hands are resting on the laptop and the book.


How do we dedicate time to research and planning without losing velocity?

A large octopus with purple suckers is the central focus of the image, positioned in an aquarium. The octopus is surrounded by various marine life, including several fish and coral. The background is dark, highlighting the octopus and the surrounding environment. The text "How do we adapt as our understanding improves?" is overlaid in white, bold font across the center of the image.


**How do we adapt as our
understanding improves?**

A person wearing a black cap, a light blue shirt, black pants, and a black backpack with green accents stands at a fork in a forest path. The path on the left is covered in brown autumn leaves and leads uphill. The path on the right is dark and appears to be a stream bed or a muddy path. The forest is dense with green trees and foliage. The text "How Do We Make Hard Decisions?" is overlaid in white, bold font across the center of the image.

How Do We Make Hard Decisions?

A close-up photograph of a laptop screen displaying a 404 error page. The screen shows the number '404' in large white font, followed by the message 'Hey, the page you were looking for doesn't seem to exist anymore.' and a button labeled 'Back to Unsplash'. The laptop is a MacBook Pro, with the keyboard visible in the foreground. The background is a blurred image of a person's face.

**How do we answer questions that
have never been asked before?**

A row of blue corrugated metal water tanks in front of a brick building. The tanks are arranged in a line, receding into the distance. The building is made of red brick and has several windows. The sky is a clear, bright blue. The text is overlaid in the center of the image.

How do we avoid duplicating work when we don't always know what we're working on?

A photograph of ancient ruins, likely the Temple of Bel in Palmyra, featuring several tall, weathered stone columns. The scene is set against a clear blue sky. The foreground shows a sandy area with scattered stone blocks and debris. In the background, a modern city skyline is visible under a clear sky. The text "How do we make sure what we've learned isn't lost after we're gone?" is overlaid in white, bold, sans-serif font across the center of the image.

How do we make sure what we've learned isn't lost after we're gone?

Thanks!

Rose Karr
@rosalinekarr