

Designing Conversations for Socially-Conscious Design

Systemic Design for Social Complexity—RSD5—Toronto 2016

Paul Pangaro, Ph.D.
Chair and Associate Professor
MFA Interaction Design Program
College for Creative Studies, Detroit
paul@pangaro.com



Paul Pangaro, Ph.D.
Chair and Associate Professor
MFA Interaction Design Program
College for Creative Studies, Detroit
paul@pangaro.com



MFA Transportation Design
MFA Color & Materials Design
MFA Integrated Design
MFA Interaction Design
College for Creative Studies, Detroit

paul@pangaro.com



Designing Conversations for Socially-Conscious Design

Paul Pangaro, Ph.D.

Chair and Associate Professor
MFA Interaction Design Program
College for Creative Studies, Detroit
pau@pangaro.com



“Design and cybernetics are really the same thing.”

— Ranulph Glanville, 2014

— RDS3 Conference, Oslo

Challenges of design

Energy

Global warming

Water

Food

Population

Health

Equality

Social justice

Challenges to design

Energy

Global warming

Water

Food

Population

Health

Equality

Social justice

Challenges to design

Energy

Global warming

Water

Food

Population

Health

Equality

Social justice

Simple problems

Complex problems / systems of systems

“Wicked problems”*

* In the strict sense of Rittel & Webber

Design = Social

Design = Social
Designing with myself

Design = Social

Designing with myself

Designing with others

Design = Conversations for Action

Designing with myself

Designing with others

Designing Conversations is the heart of 21st-century design practice

**Designing Conversations is the heart
of 21st-century design practice**
Designing for Conversations by Everyone

Designing Conversations is the heart of 21st-century design practice

Designing for Conversations by Everyone
Designing for Conversations for Design

We believe cybernetics offers a foundation for 21st-century design practice, with this rationale:

— Dubberly & Pangaro, “Cybernetics and Design: Conversations for Action”, 2015



[If design, then systems.

]

If design, then systems.

If systems, then cybernetics.

]

If design, then systems.

If systems, then cybernetics.

If cybernetics, then second-order cybernetics.

If design, then systems.

If systems, then cybernetics.

If cybernetics, then second-order cybernetics.

If second-order cybernetics, then conversation.

— Dubberly & Pangaro, “Cybernetics and Design: Conversations for Action”, 2015

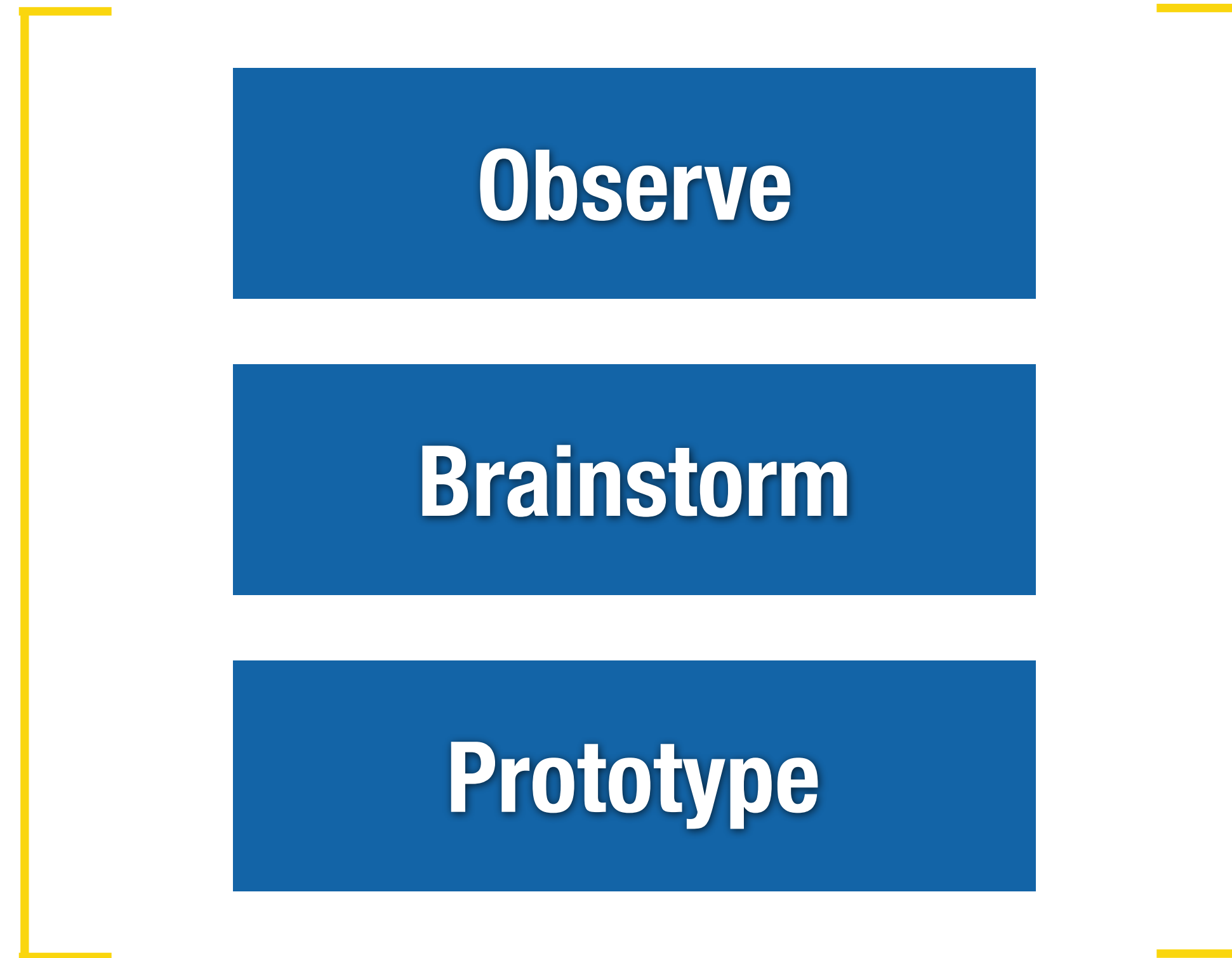
Design...

Design... from Thinking to Conversation



**Design
Thinking**

What is the process of Design Thinking?



What Does that mean?

Ethnography

Observe

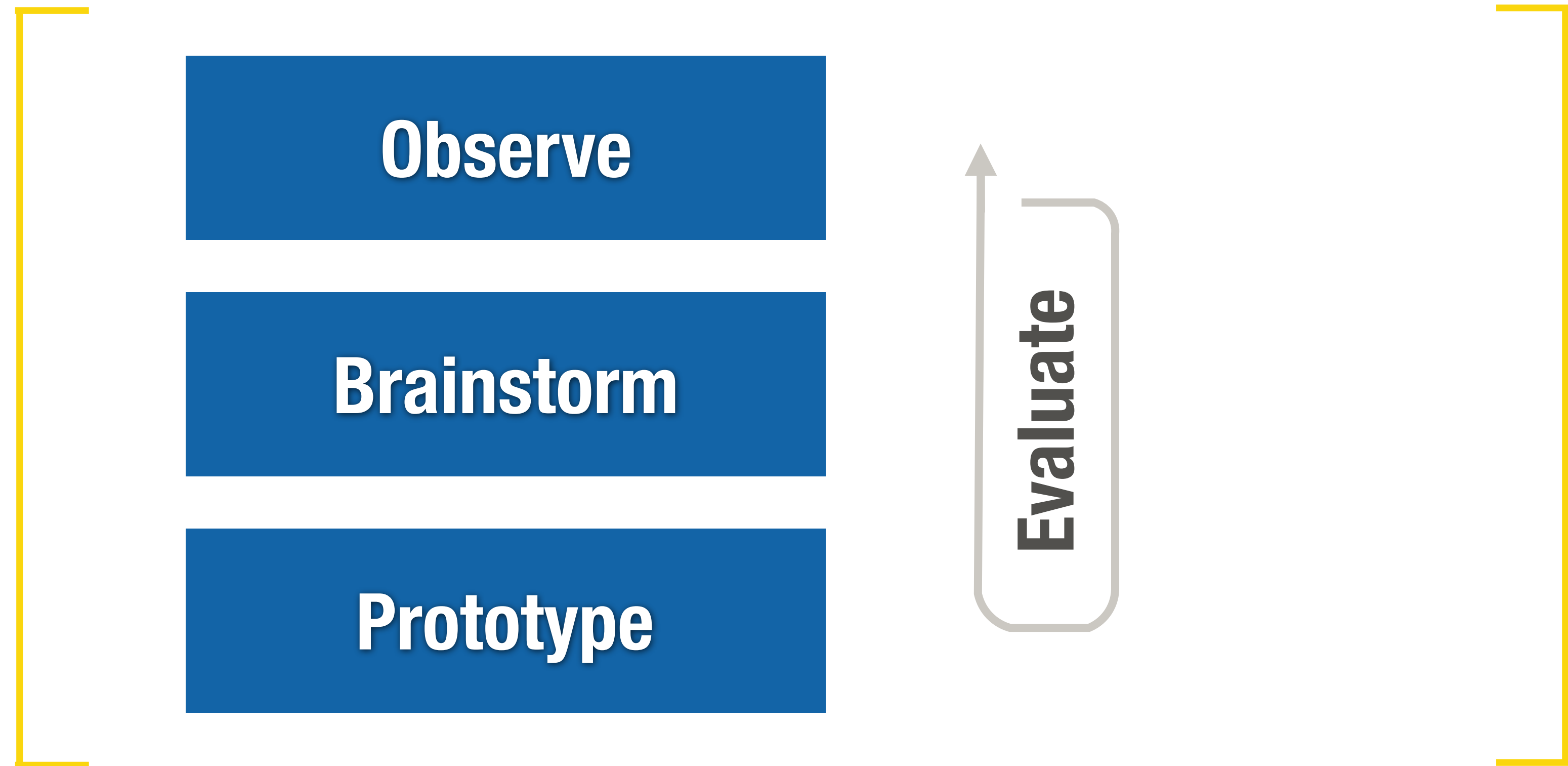
Open-ended idea
generation

Brainstorm

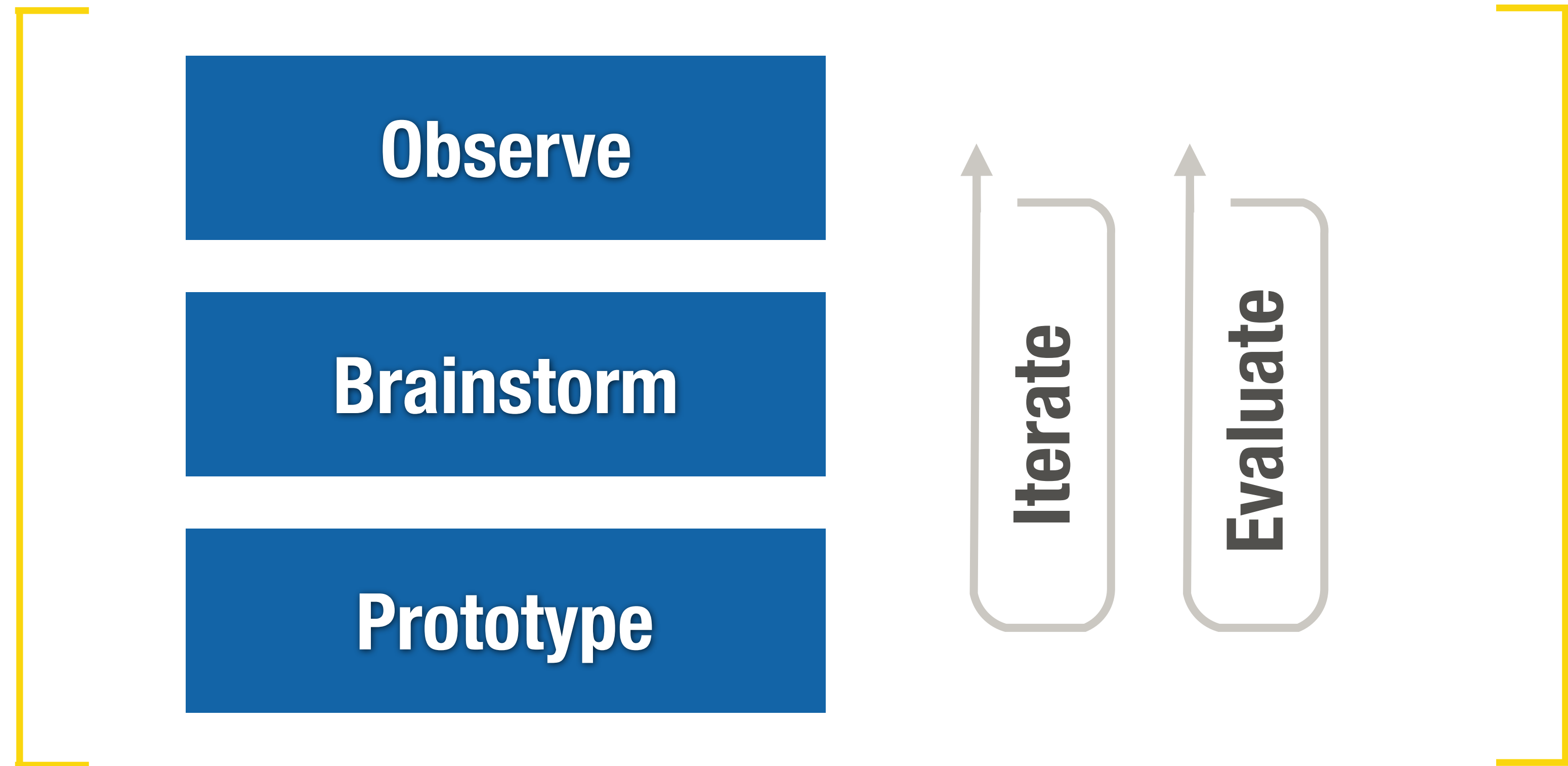
Making and
testing

Prototype

What Does that mean?



What Does that mean?



Limitations

Specific?

Rigorous?

Repeatable?

Observe

Brainstorm

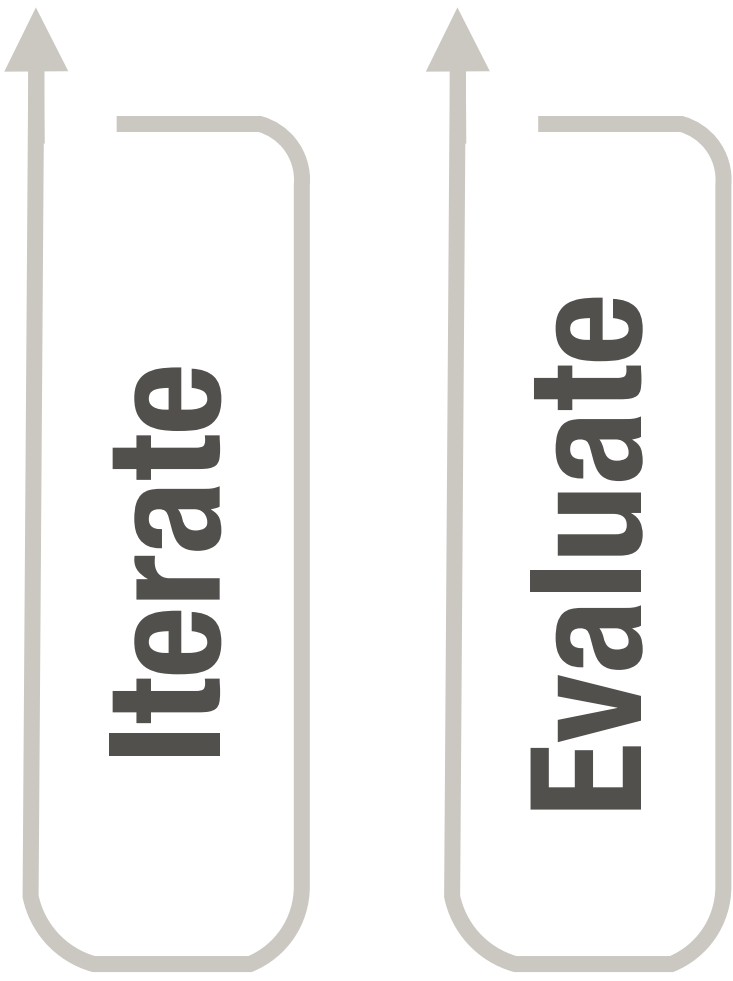
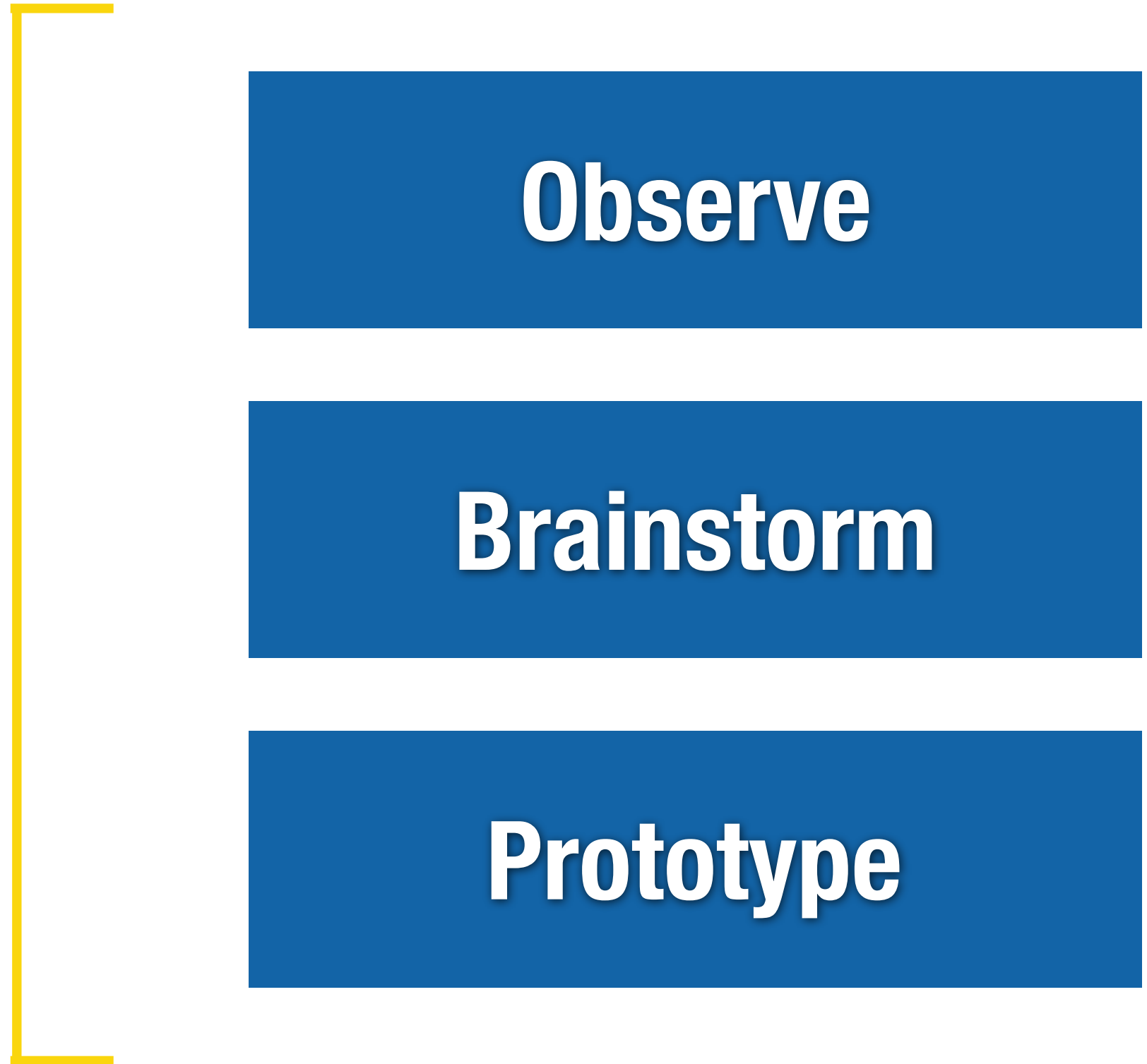
Prototype

Iterate

Evaluate

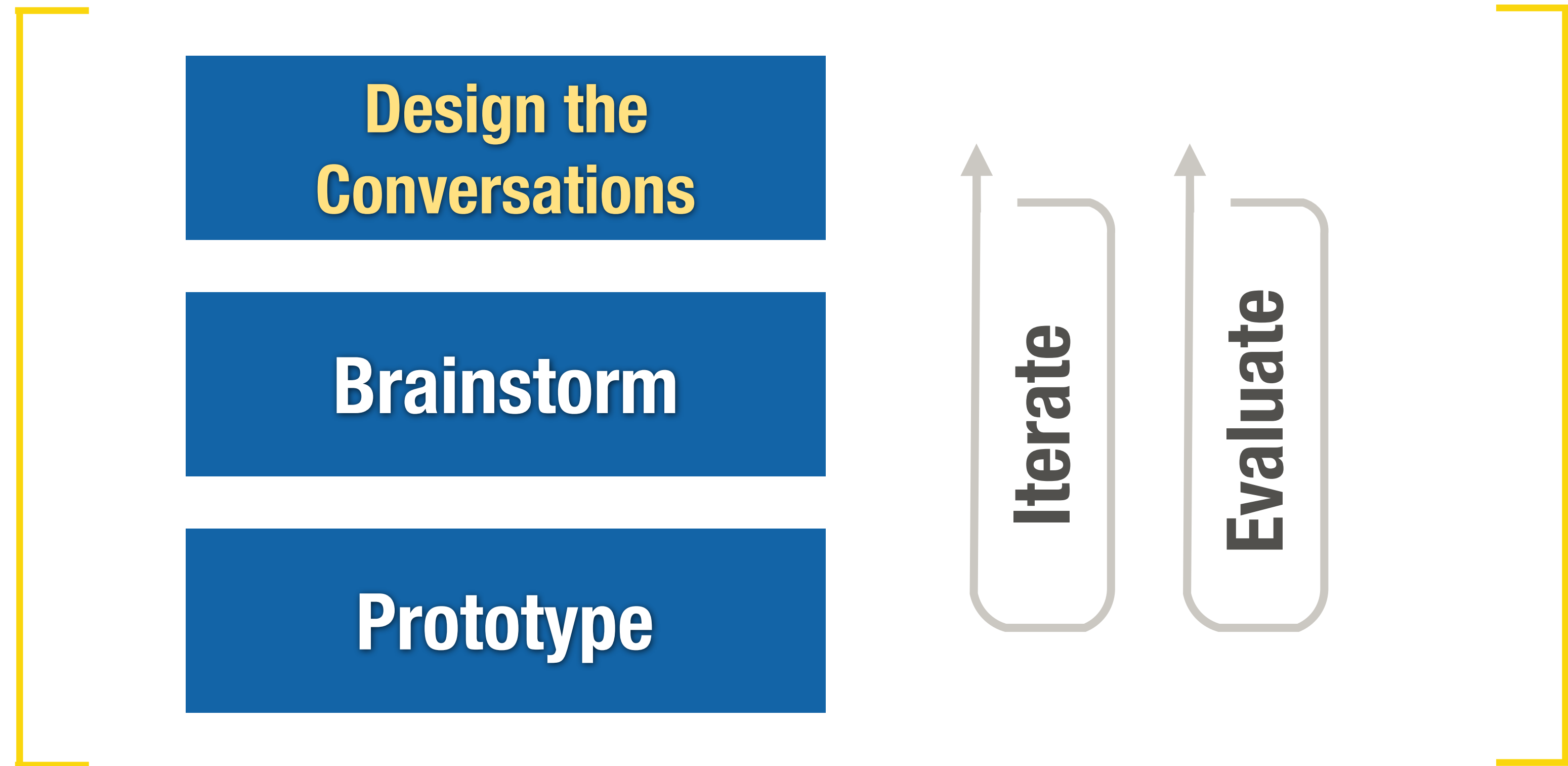
Limitations

Specific?
Rigorous?
Repeatable?

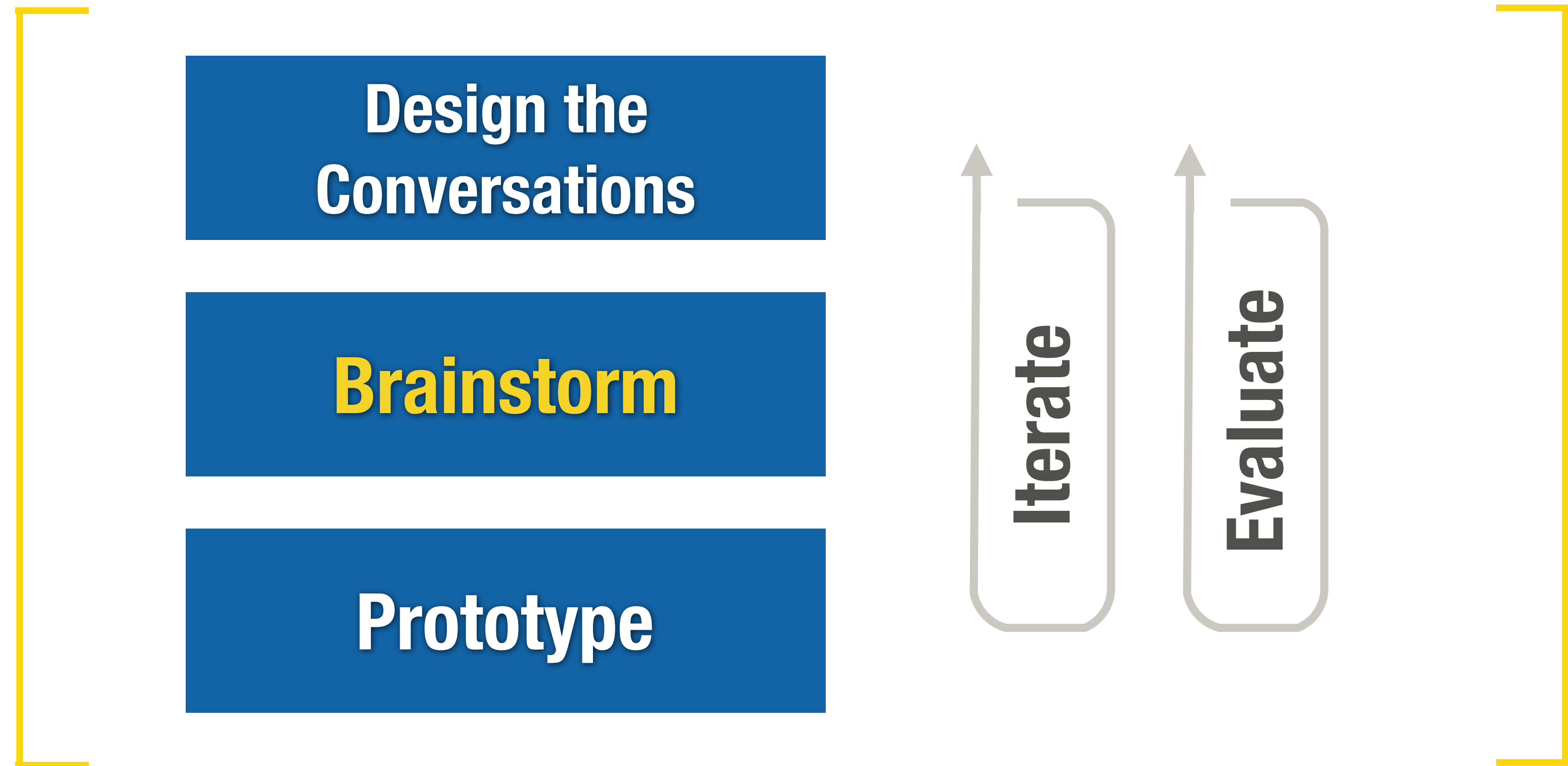


Clear?
Quantifiable?
Directed?

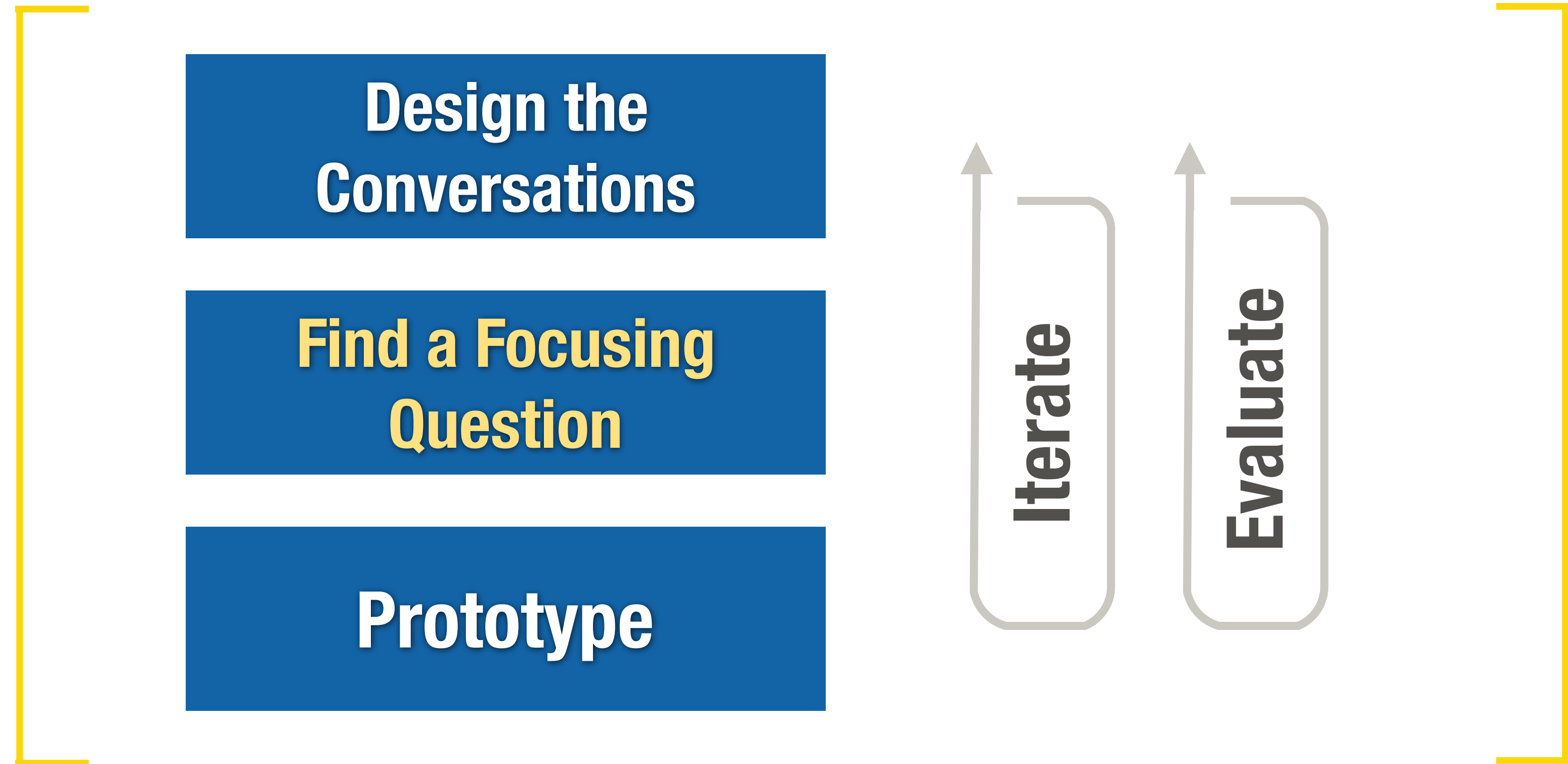
Design the Conversations



Design the Conversations



Find a Focusing Question



Requirements for Focusing Questions

Requirements for Focusing Questions

Actionable information flows, not transformation of mass & energy—
so it participates in the new economy, the move from “atoms to bits.”

Requirements for Focusing Questions

Actionable information flows, not transformation of mass & energy—so it participates in the new economy, the move from “atoms to bits.”

Economic potential—removing uncertainty in the market, creating order from disorder, lowering the human cost of achieving our goals, are all worth something.

Requirements for Focusing Questions

Actionable information flows, not transformation of mass & energy—so it participates in the new economy, the move from “atoms to bits.”

Economic potential—removing uncertainty in the market, creating order from disorder, lowering the human cost of achieving our goals, are all worth something.

Consistent with the social system—connecting to who we are (our history) and what we can see ourselves engaging in.

Requirements for Focusing Questions

Actionable information flows, not transformation of mass & energy—so it participates in the new economy, the move from “atoms to bits.”

Economic potential—removing uncertainty in the market, creating order from disorder, lowering the human cost of achieving our goals, are all worth something.

Consistent with the social system—connecting to who we are (our history) and what we can see ourselves engaging in.

Engage individuals who want to do it.

Requirements for Focusing Questions

Actionable information flows, not transformation of mass & energy—so it participates in the new economy, the move from “atoms to bits.”

Economic potential—removing uncertainty in the market, creating order from disorder, lowering the human cost of achieving our goals, are all worth something.

Consistent with the social system—connecting to who we are (our history) and what we can see ourselves engaging in.

Engage individuals who want to do it.

Reveal the necessary variety of expertise required for exploring the question, so that we can define it and make it available (requisite variety).

Requirements for Focusing Questions

Actionable information flows, not transformation of mass & energy—so it participates in the new economy, the move from “atoms to bits.”

Economic potential—removing uncertainty in the market, creating order from disorder, lowering the human cost of achieving our goals, are all worth something.

Consistent with the social system—connecting to who we are (our history) and what we can see ourselves engaging in.

Engage individuals who want to do it.

Reveal the necessary variety of expertise required for exploring the question, so that we can define it and make it available (requisite variety).

Teach the organization as a whole—so that what is learned can be reproduced.

Find a Focusing Question

Economic Potential
Using bits &
reducing uncertainty

Social Potential
Consistent with who
we are & want to be

Systemic Potential
Engages variety

**Design the
Conversations**

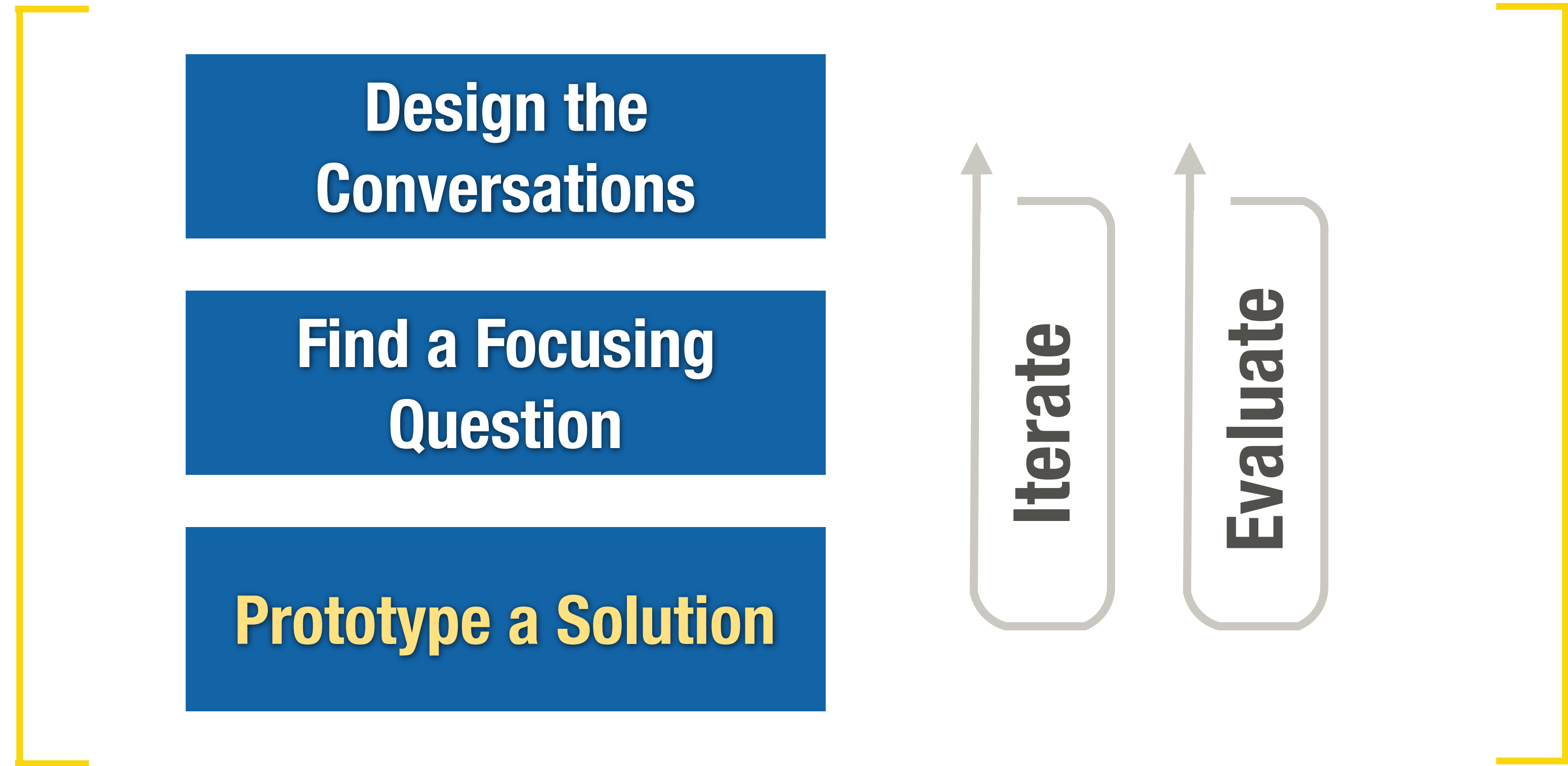
**Find a Focusing
Question**

Prototype

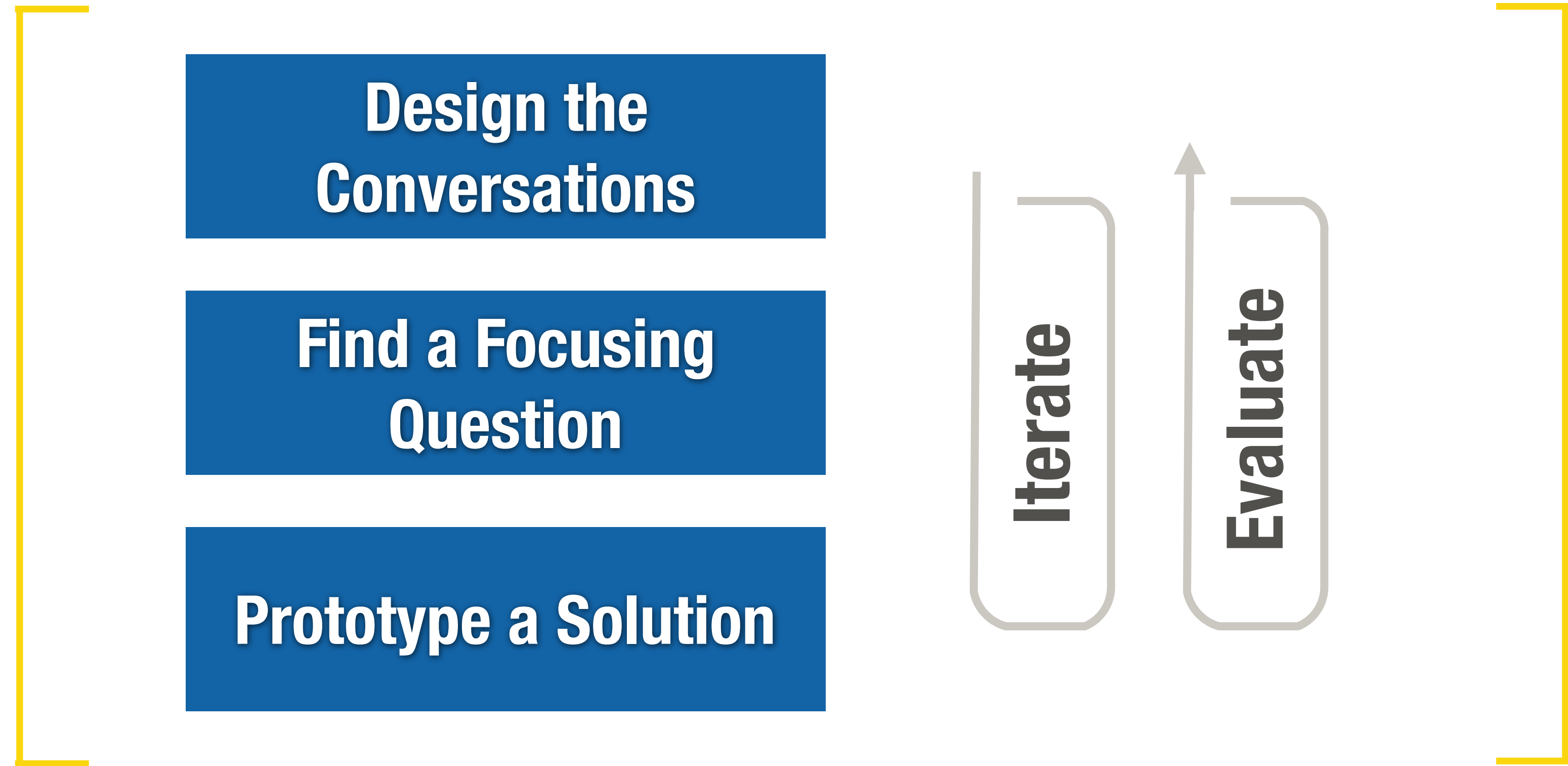
Iterate

Evaluate

Prototype a Solution



Iterate & Evaluate



Iterate & Evaluate

Measure
Improvements
for Users

**Design the
Conversations**

**Find a Focusing
Question**

Prototype a Solution

Iterate

Evaluate

Iterate & Evaluate

Measure
Improvements
for Users

Measure
Convergence
on design goals

**Design the
Conversations**

**Find a Focusing
Question**

Prototype a Solution

Iterate

Evaluate

Conversation is the core

Measure
Improvements
for Users

Measure
Convergence
on design goals

**Conversation to
Agree on Means**

Conversation is the core

Measure
Improvements
for Users

Measure
Convergence
on design goals

**Conversation to
Agree on Means**

Design... from Thinking to Conversation



**Design
Thinking**

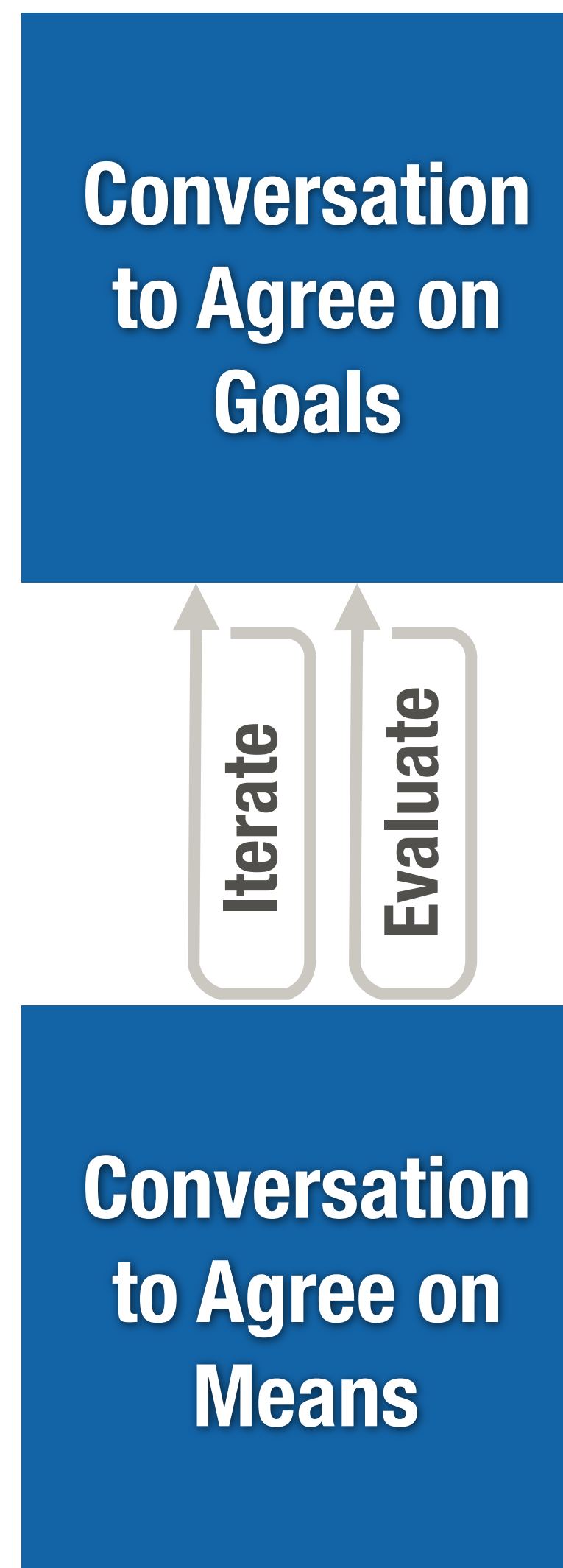
Rethinking Design Thinking

**Conversation
to Agree on Means**

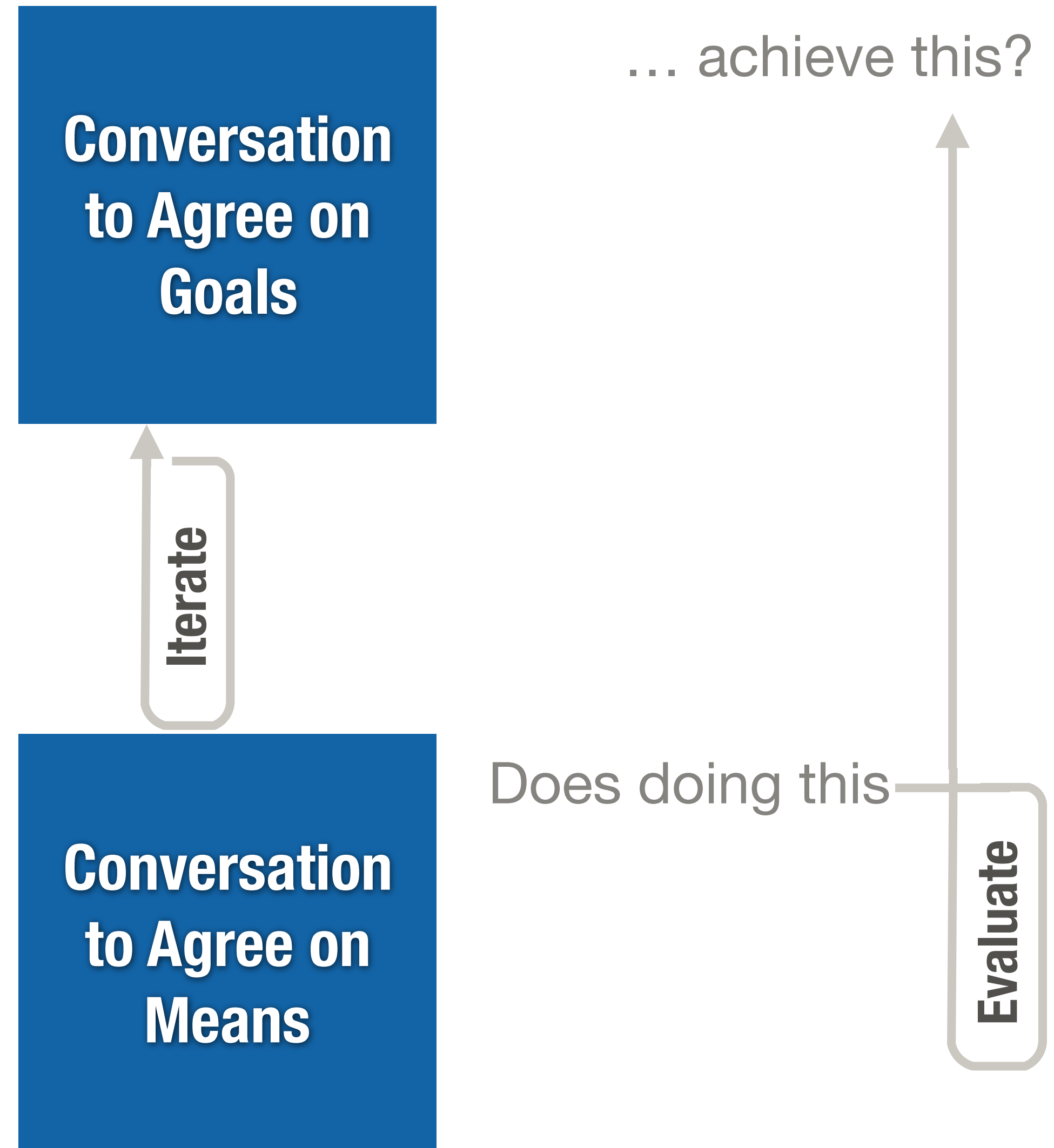
Design as Conversation

**Conversation
to Agree on
Means**

Design as Conversation



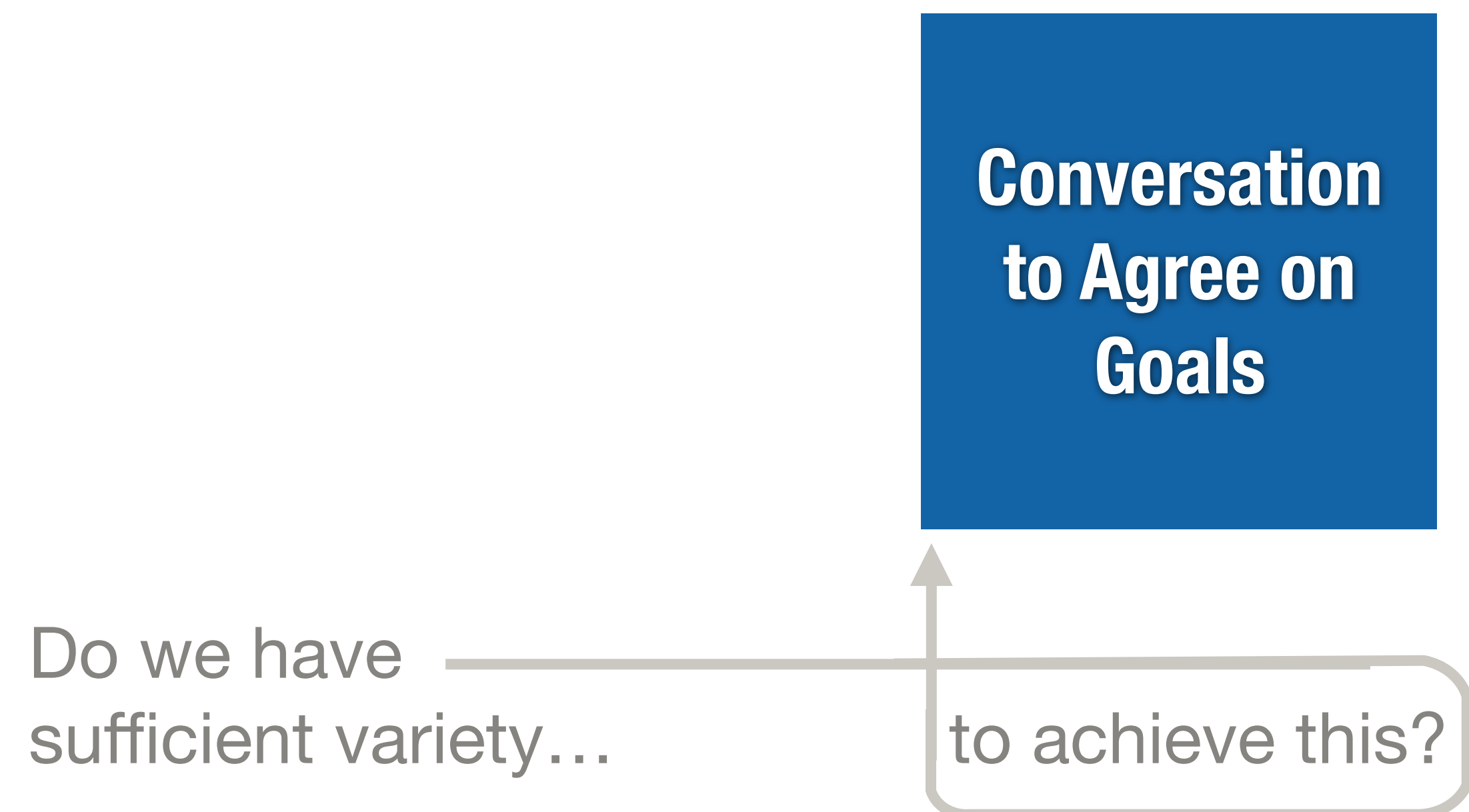
Design as Conversation



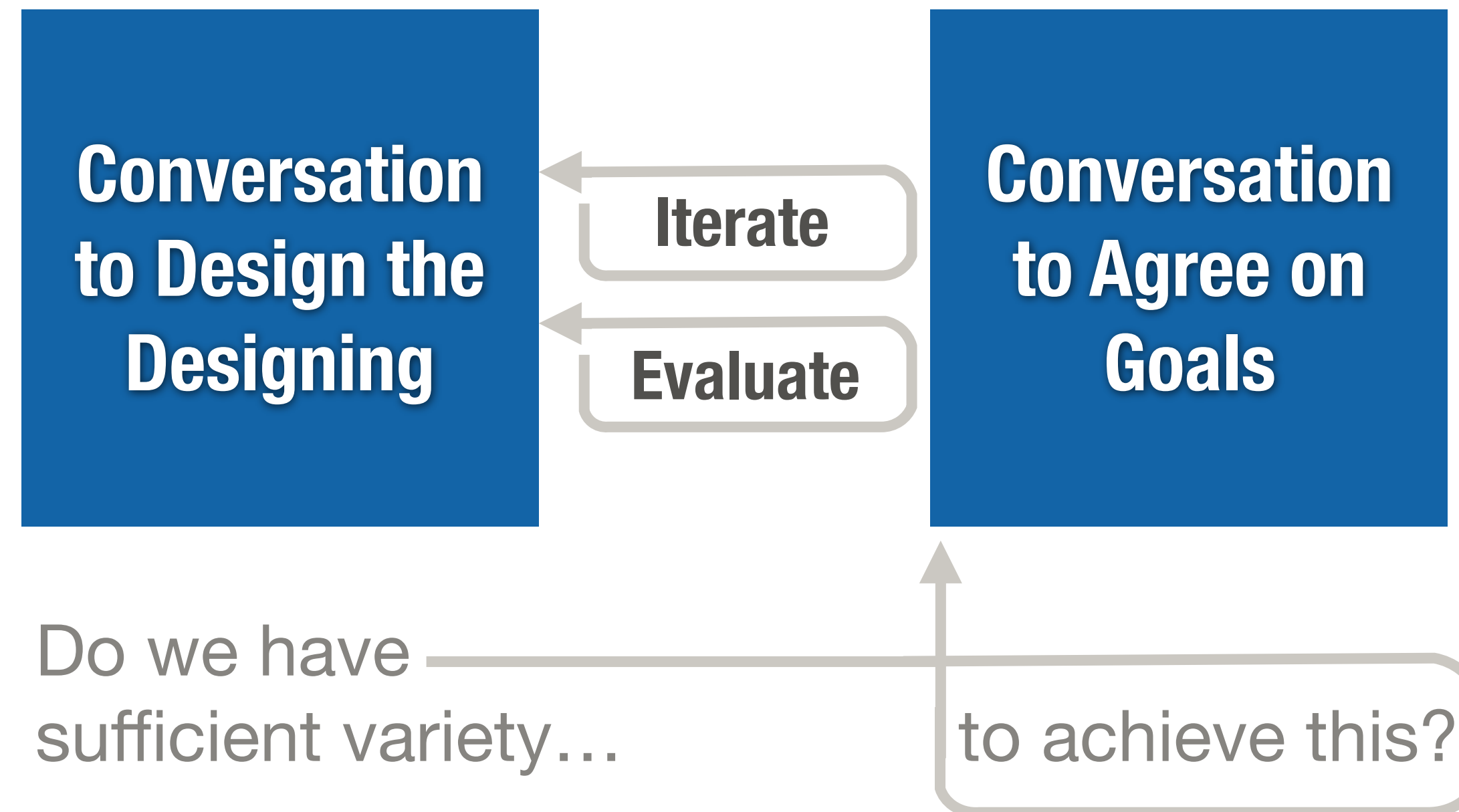
Design as Conversation

**Conversation
to Agree on
Goals**

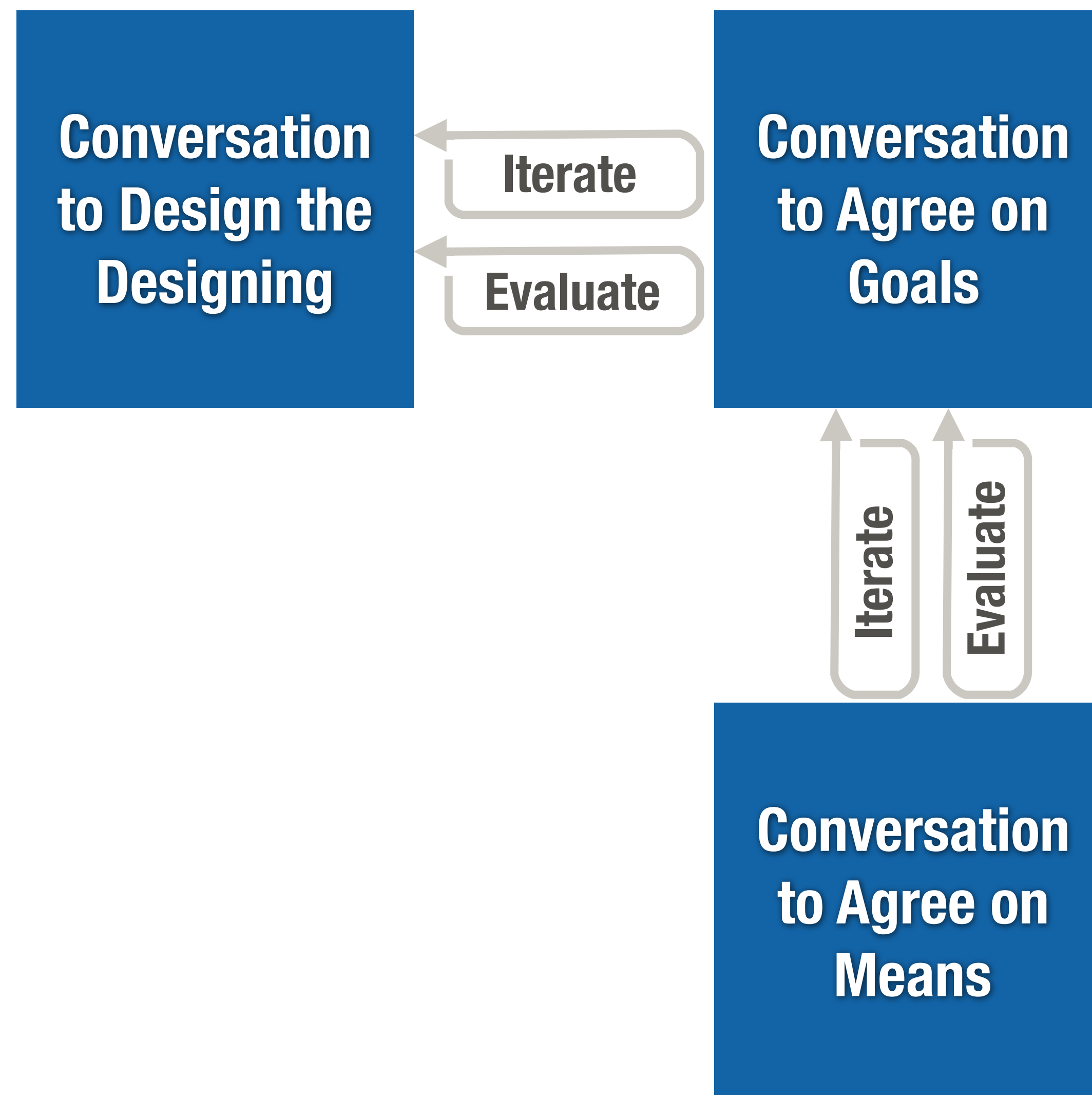
Design as Conversation



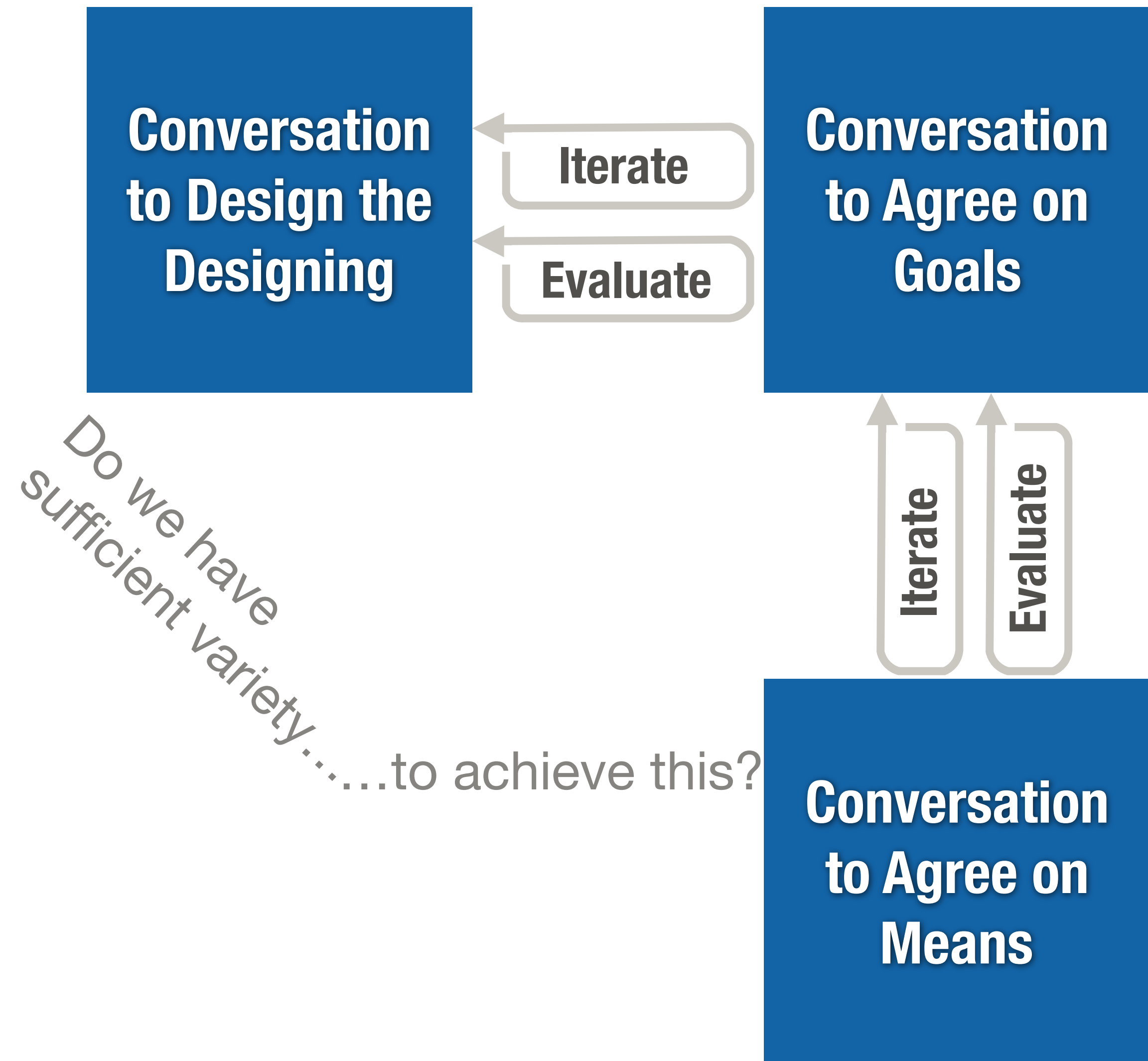
Design as Conversation



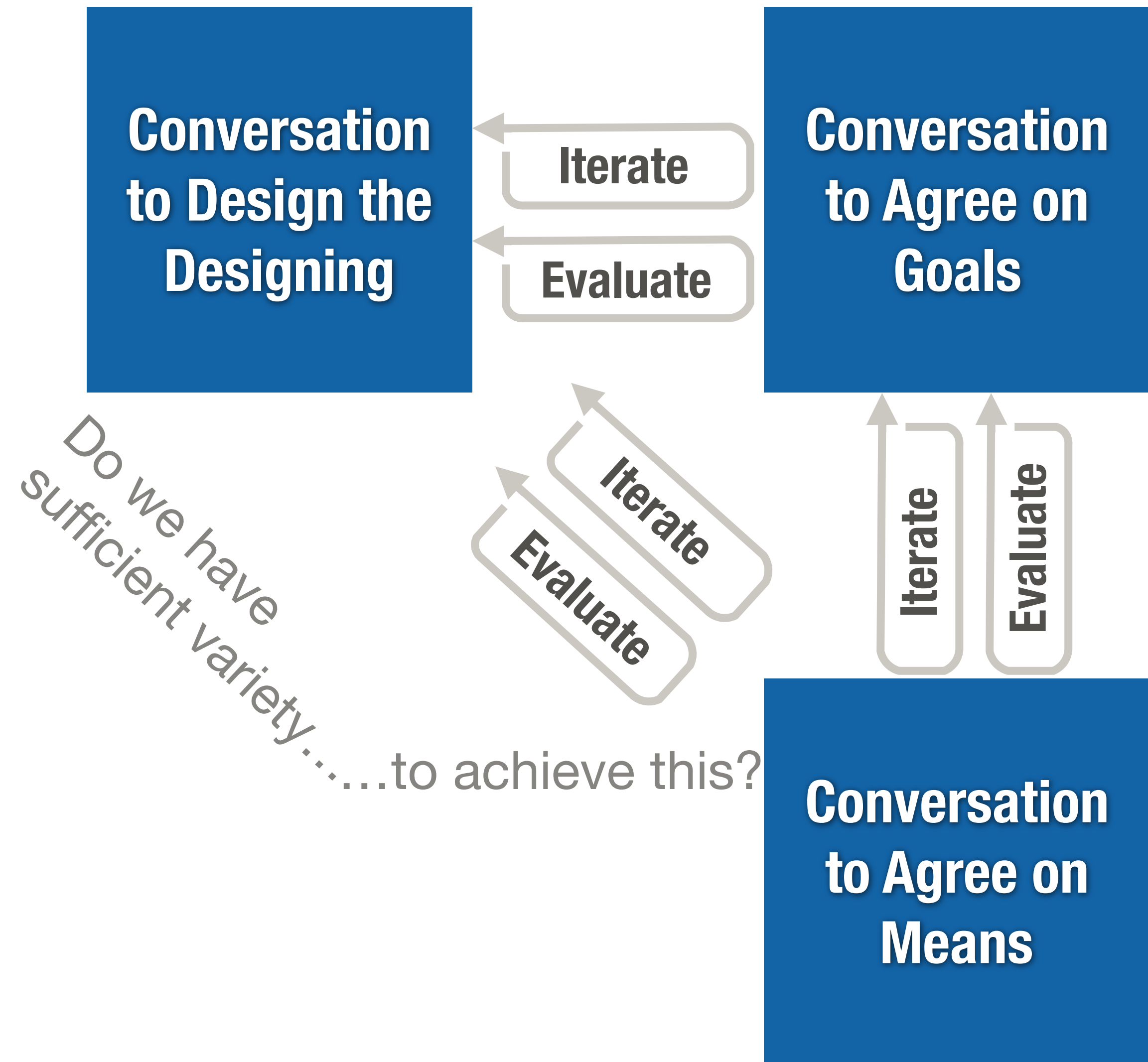
Design as Conversation



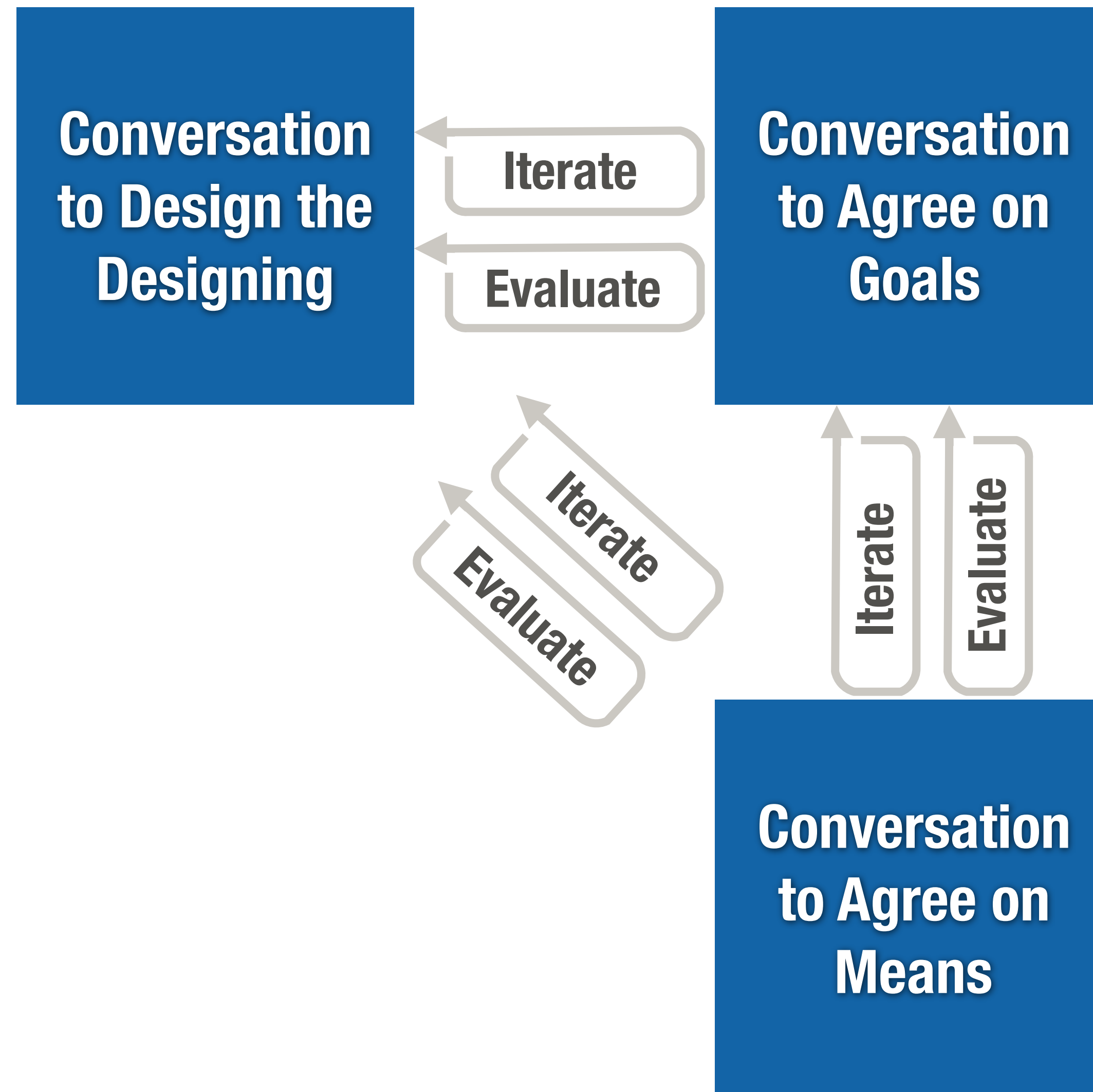
Design as Conversation



Design as Conversation



Design as Conversation



CONVERSATION

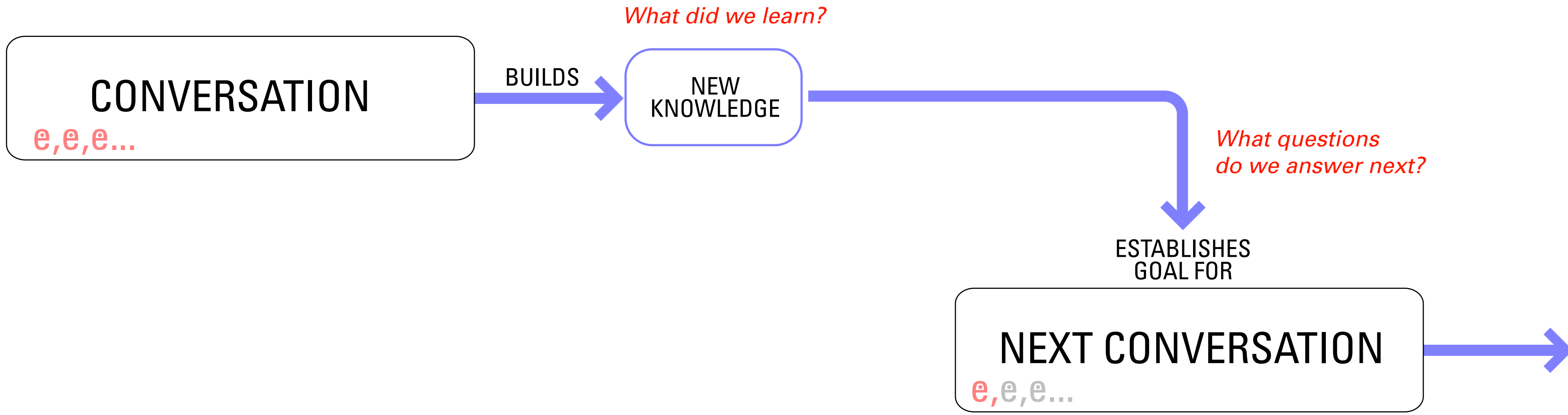
e,e,e...

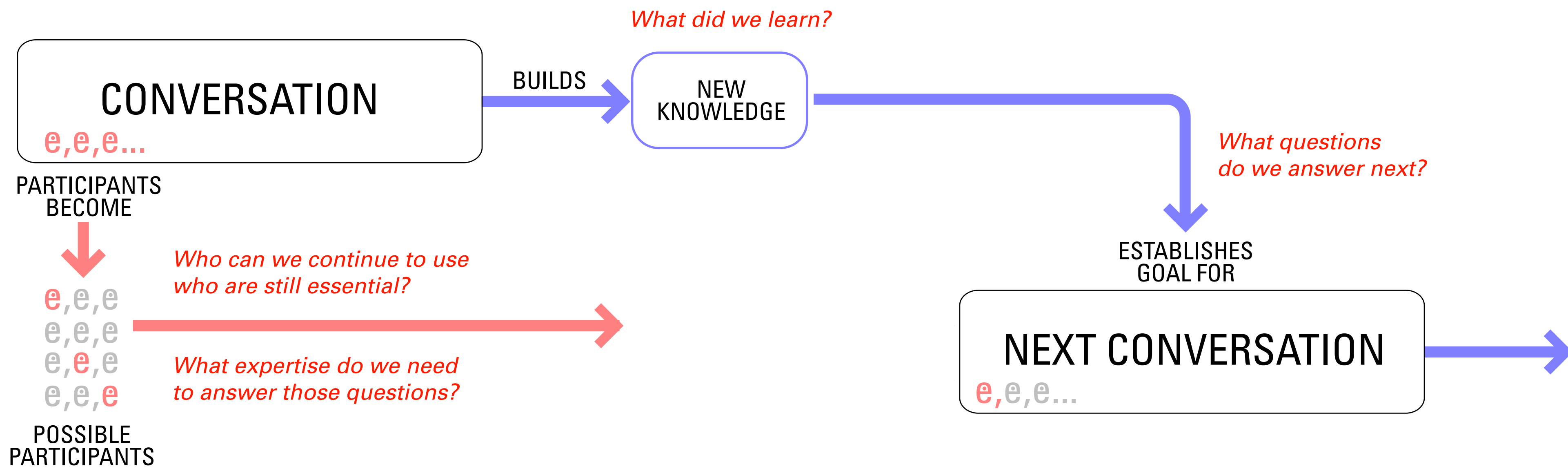
CONVERSATION
e,e,e...

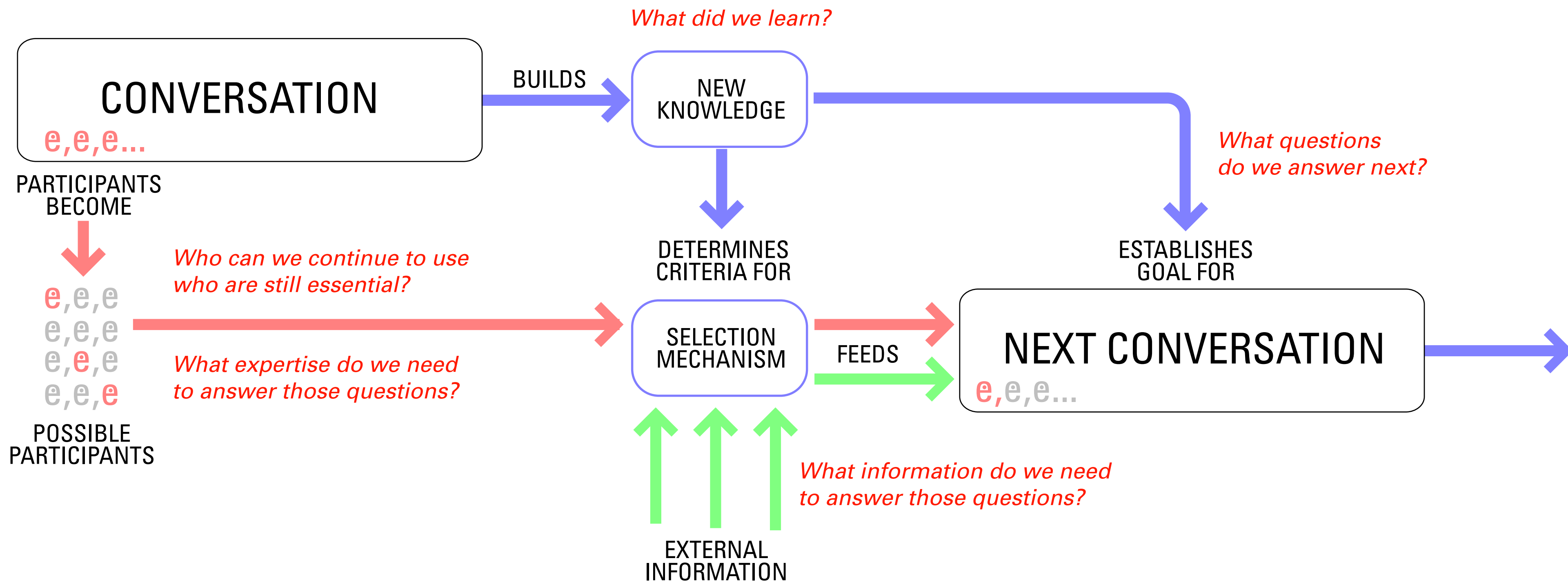
BUILDS →

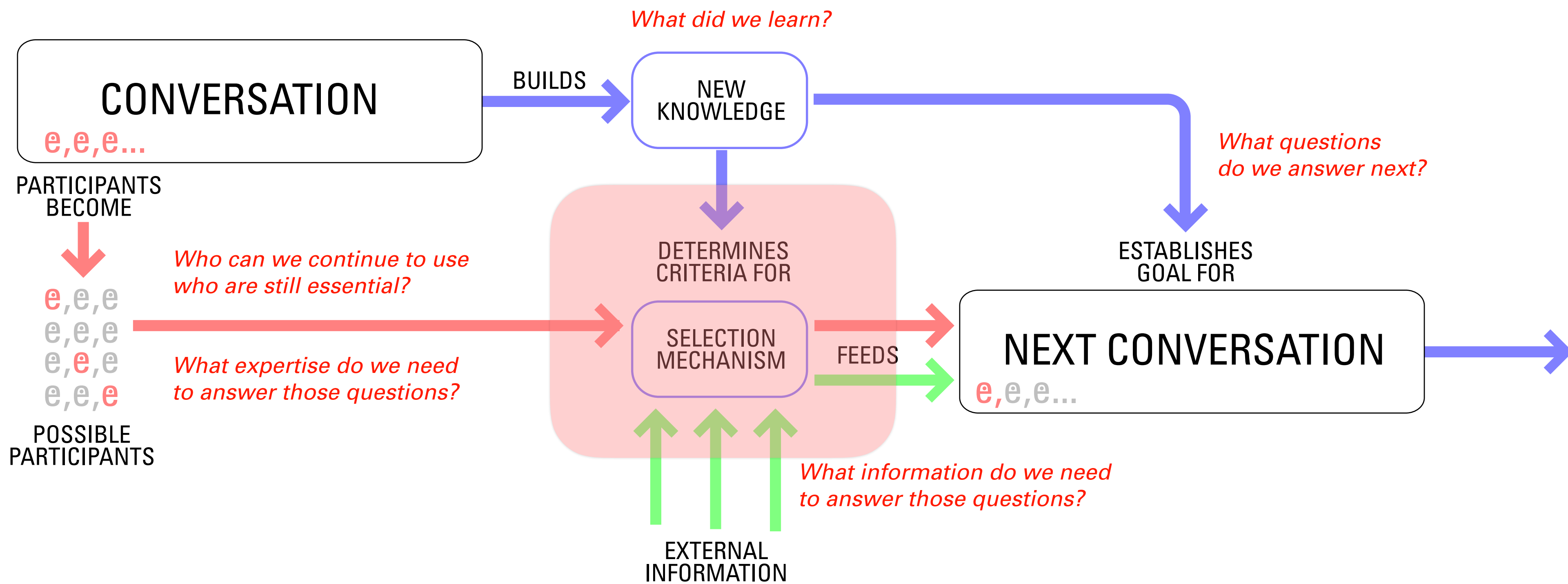
**NEW
KNOWLEDGE**

What did we learn?









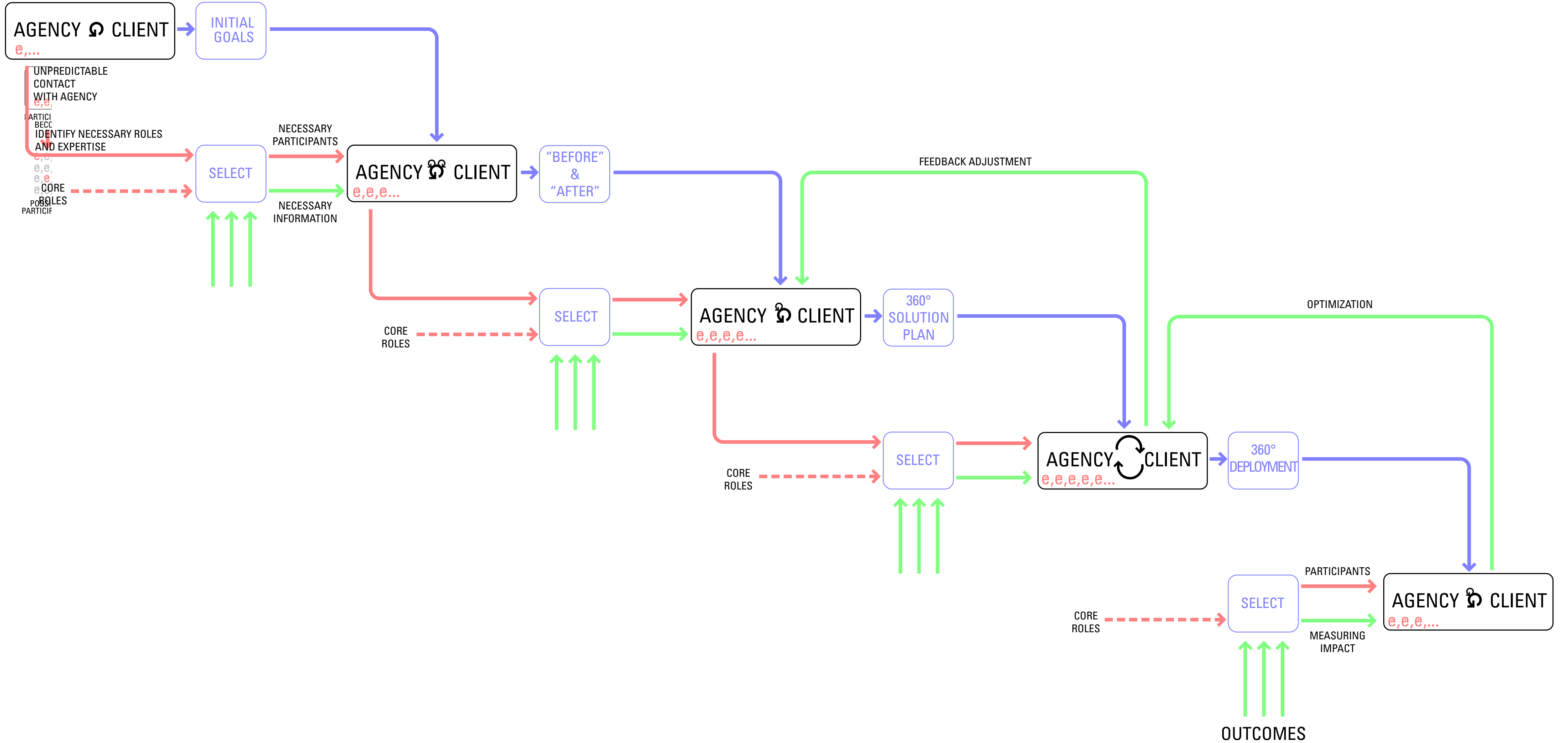
catalyst

ideation

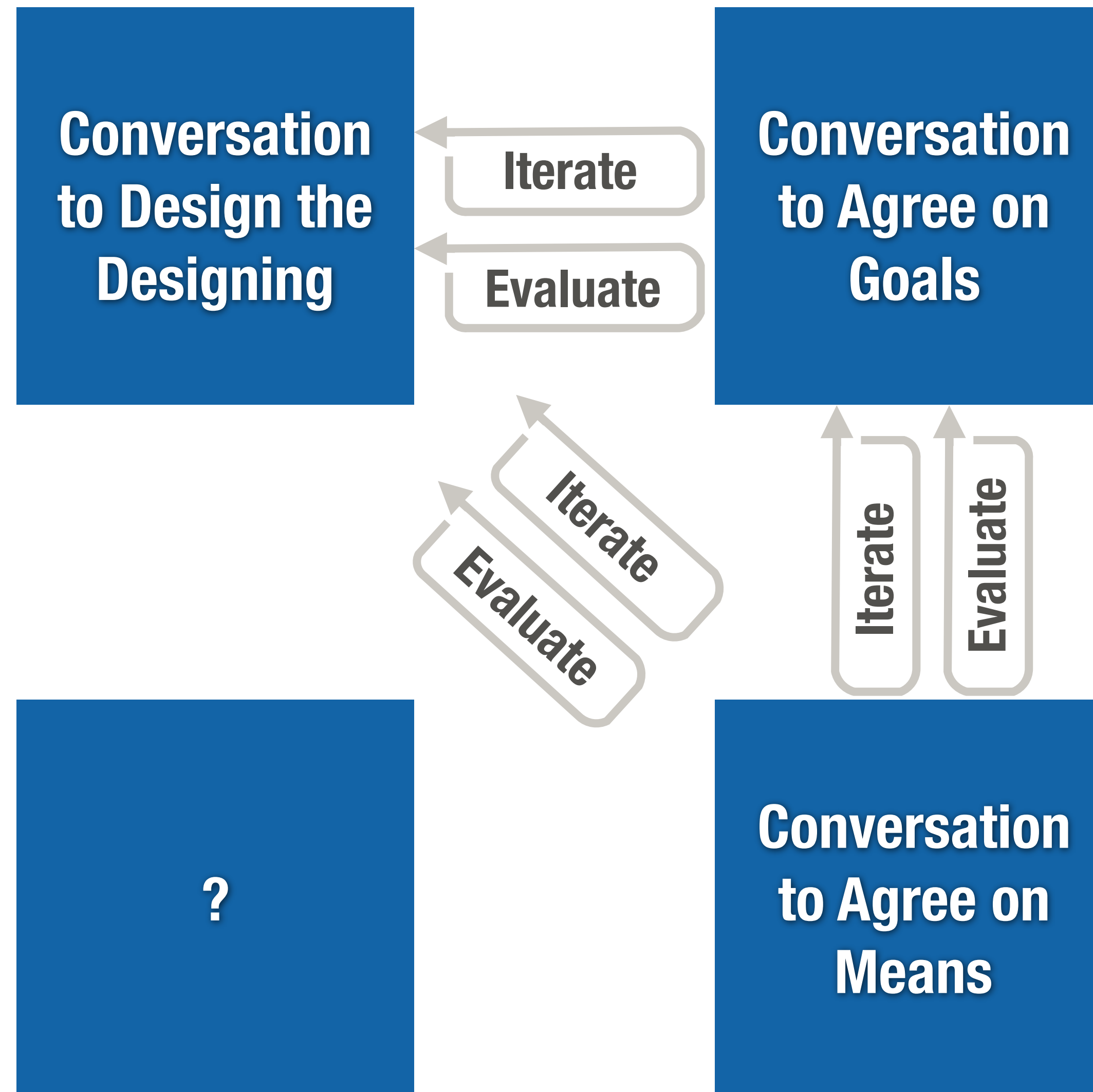
solution

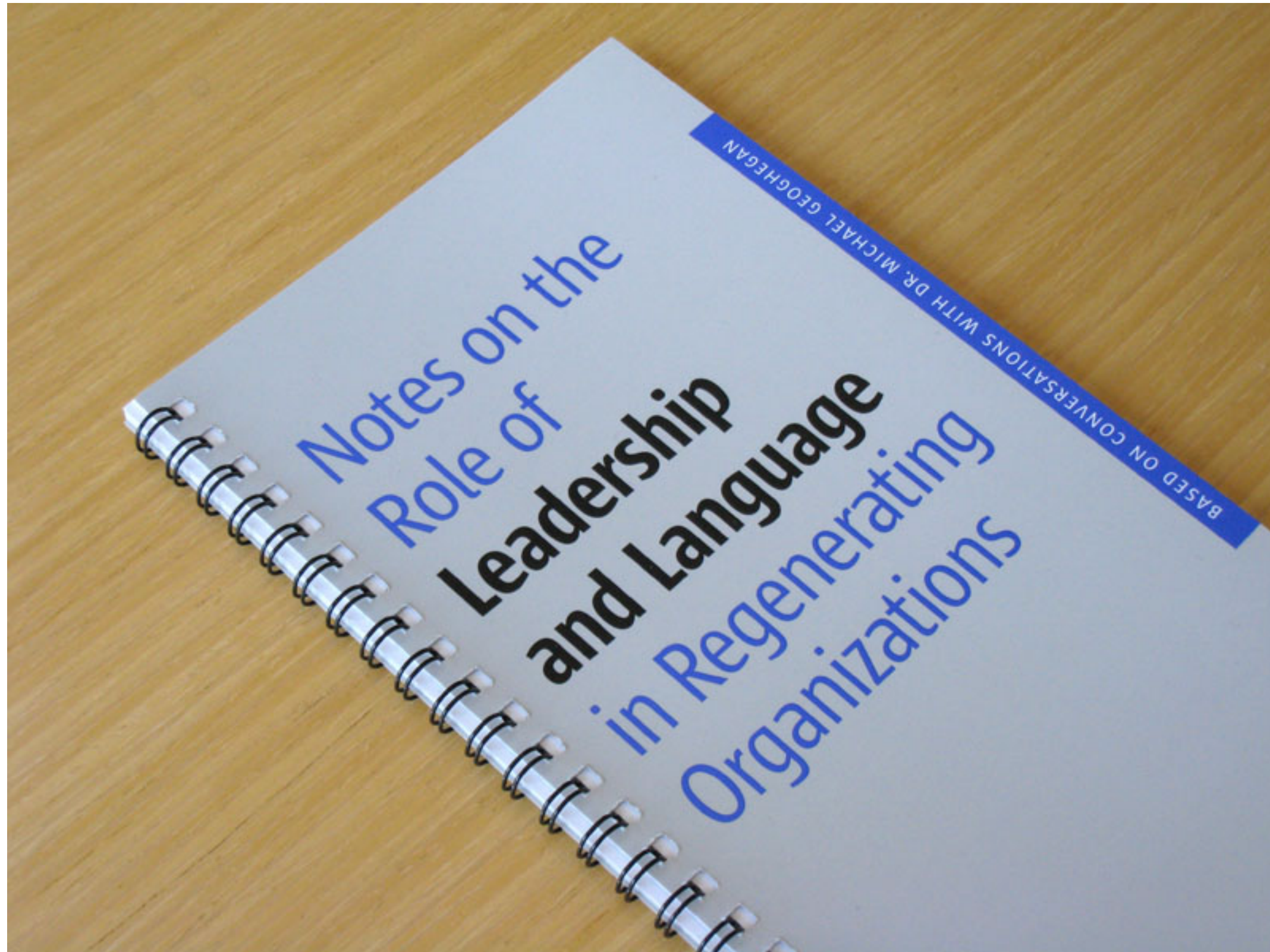
delivery

evaluation



Design as Conversation





An organization is its language.

Ultimately,
an organization consists of conversations:
who talks to whom, about what.

Each conversation
is recognized, selected, and amplified
(or ignored) by the system.
Decisions, actions, and a sense of valid purpose
grow out of these conversations.

Conversation leads to agreement.
Agreement leads to transaction.

Narrowing language increases efficiency.

Organizations create their own internal language to solve specific problems.

This language serves as a kind of shorthand: Managers use it every day, knowing they will be clearly understood.

Over time, this internal language grows increasingly specialized — and narrow.

Narrowing language also increases ignorance.

The organization's internal language is designed to help managers facilitate present-day business — not look beyond it.

Using the internal language, managers increase efficiencies, but cannot recognize new fields of research, new discoveries, new approaches.

Past language limits future vision.

Managers understand the organization's past behavior.
But this knowledge,
and the language that accompanies it,
limit their vision
of the organization's potential future state.

Using the language of the past,
managers may try to provide a vision for the future.
But it is an old future —
a memory of what the future could be.

Managers may strive for fundamental change,
but their language prevents them from achieving it.

Expanding **language** increases opportunity.

The conversations necessary
for generating new opportunities
come from outside the system.

For an organization to survive,
it must be able to acquire
new, relevant language domains.

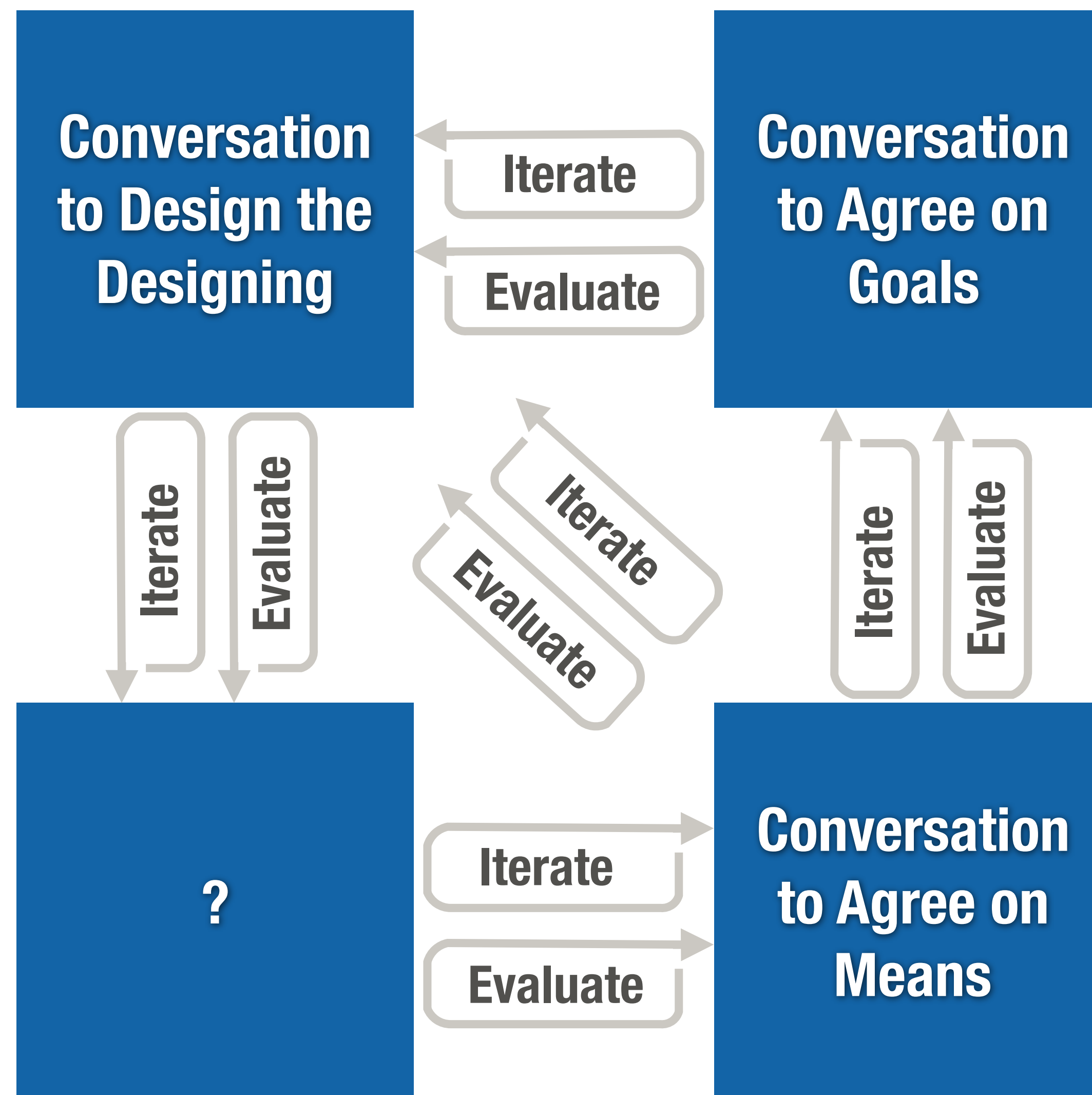
To regenerate,
an organization creates
a new **language**.

To support an organization's future viability, effective decision makers actively introduce change into the system.

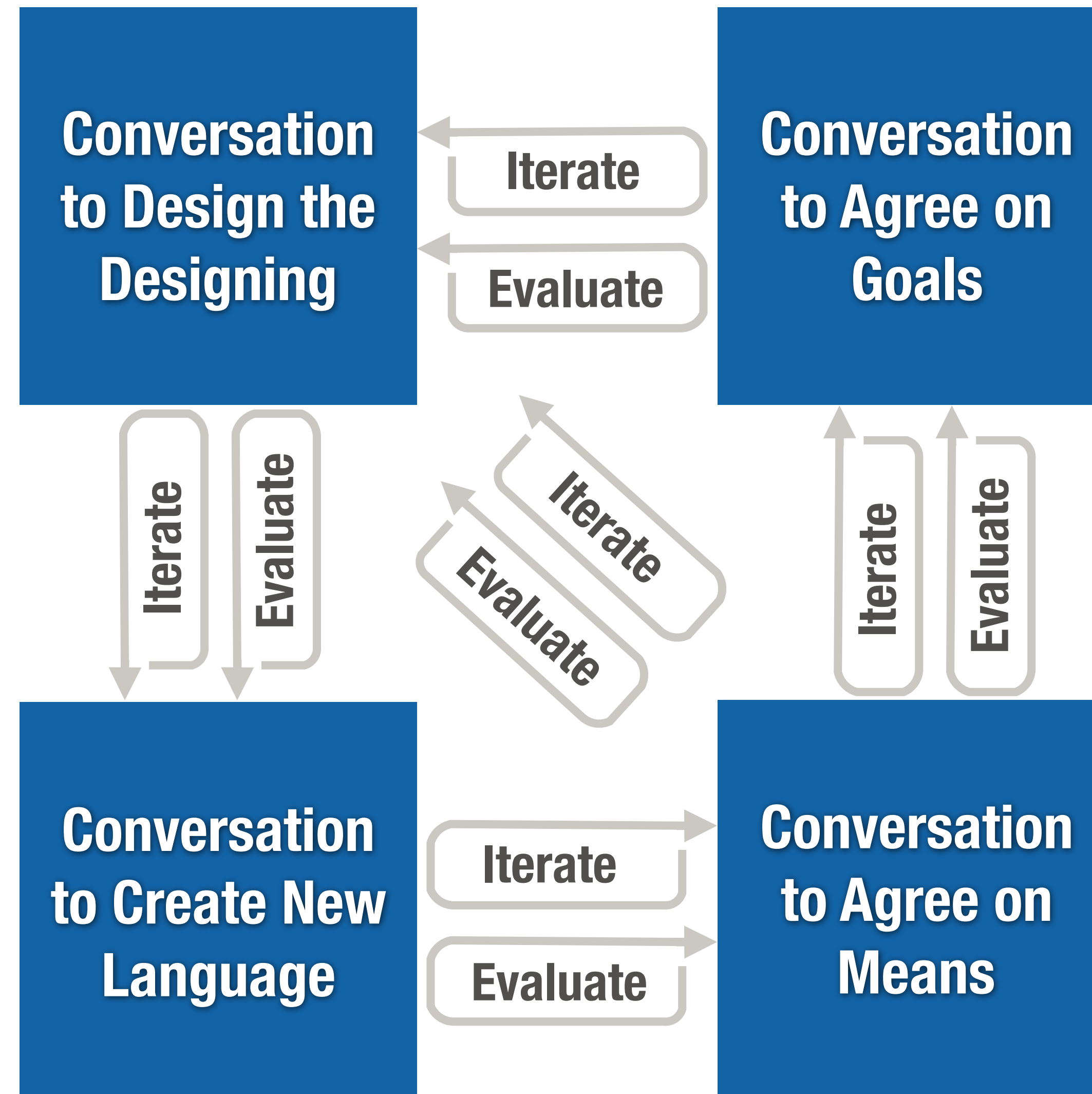
They do so by generating new language that appropriate groups in the organization come to understand and embrace.

This new language does not overtly challenge the pre-existing, efficient system, but rather creates new distinctions and supportive relationships.

Design as Conversation



Design as Conversation



Design = Social = Conversations for Action



Design = Social = Conversations for Action

If we converse explicitly about goals, we are transparent about frames and values.

Design = Social = Conversations for Action

If we converse explicitly about goals, we are transparent about frames and values.
(This is ethical.)

Design = Social = Conversations for Action

If we converse explicitly about goals, we are transparent about frames and values.
(This is ethical.)

**If we converse about the means to achieve those goals,
we more fully engage participants and their abilities, improving outcomes.**

Design = Social = Conversations for Action

If we converse explicitly about goals, we are transparent about frames and values.
(This is ethical.)

**If we converse about the means to achieve those goals,
we more fully engage participants and their abilities, improving outcomes.**
(This is collaborative.)

Design = Social = Conversations for Action

If we converse explicitly about goals, we are transparent about frames and values.
(This is ethical.)

**If we converse about the means to achieve those goals,
we more fully engage participants and their abilities, improving outcomes.**
(This is collaborative.)

**If we converse to co-evolve new language, we can escape the limitations
of current viewpoints, and create new frames and new possibilities.**

Design = Social = Conversations for Action

If we converse explicitly about goals, we are transparent about frames and values.
(This is ethical.)

**If we converse about the means to achieve those goals,
we more fully engage participants and their abilities, improving outcomes.**
(This is collaborative.)

**If we converse to co-evolve new language, we can escape the limitations
of current viewpoints, and create new frames and new possibilities.**
(This is innovative.)

Design = Social = Conversations for Action

If we converse explicitly about goals, we are transparent about frames and values.
(This is ethical.)

**If we converse about the means to achieve those goals,
we more fully engage participants and their abilities, improving outcomes.**
(This is collaborative.)

**If we converse to co-evolve new language, we can escape the limitations
of current viewpoints, and create new frames and new possibilities.**
(This is innovative.)

**If we converse about the design process, we enter all our conversations
as participants, answerable for our actions.**

Design = Social = Conversations for Action

If we converse explicitly about goals, we are transparent about frames and values.
(This is ethical.)

**If we converse about the means to achieve those goals,
we more fully engage participants and their abilities, improving outcomes.**
(This is collaborative.)

**If we converse to co-evolve new language, we can escape the limitations
of current viewpoints, and create new frames and new possibilities.**
(This is innovative.)

**If we converse about the design process, we enter all our conversations
as participants, answerable for our actions.**
(This is responsible.)

Design = Social = Conversations for Action

If we converse explicitly about goals, we are transparent about frames and values.

(To agree on goals is ethical.)

**If we converse about the means to achieve those goals,
we more fully engage participants and their abilities, improving outcomes.**

(To agree on means is collaborative.)

**If we converse to co-evolve new language, we can escape the limitations
of current viewpoints, and create new frames and new possibilities.**

(To create new language is innovative.)

**If we converse about the design process, we enter all our conversations
as participants, answerable for our actions.**

(To design the designing is responsible.)

Design = Social = Conversations for Action

(To agree on goals is ethical.)

(To agree on means is collaborative.)

(To create new language is innovative.)

(To design the designing is responsible.)

***“Conversation is the bridge between
cybernetics and design.”***

— Ranulph Glanville, 2009

Thank you.

See pangaro.com/rsd5 for slides and references

Special Thanks to:

Ranulph Glanville

Peter Jones

Hugh Dubberly

Michael C. Geoghegan

Pooja Upadhyay

Paul Pangaro, Ph.D.
Chair and Associate Professor
MFA Interaction Design Program
College for Creative Studies, Detroit
paul@pangaro.com



***“Design is the action;
Second-order Cybernetics is the explanation.”***

— Ranulph Glanville, 2009

— Glanville, “Second-order Cybernetics”, in *Systems Science and Cybernetics - Volume III*