

# Systemic Leadership for Software Teams

FRANCISCO TRINDADE  
ENGINEERING DIRECTOR @ BRAZE

 [MEDIUM.COM/FRANCISCOMT](https://medium.com/franciscomt)

 [FRANCISCOMT](https://www.linkedin.com/company/franciscomt)

 [@FRANKMT](https://twitter.com/frankmt)

**Engineering  
Leadership  
is complex**

# Engineering Leadership is complex

TIMELINES &  
DEADLINES

ENGINEERING  
QUALITY

PLANNING &  
ROADMAPPING

TECHNICAL  
OWNERSHIP

PEOPLE  
CHALLENGES

MANAGING  
UP & DOWN

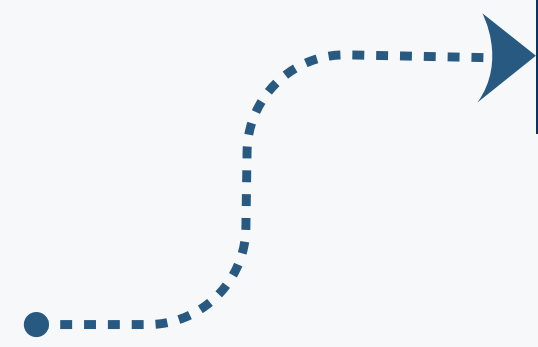
**Engineering  
Leadership  
is complex**

**How to  
simplify  
it?**

**"The whole is  
*simpler* than  
the sum of its  
parts."**

**- WILLARD  
GIBBS**

INPUTS



**YOUR TEAM  
AS A SYSTEM**



OUTPUTS

**THE  
HOT  
TAKE**



THINKING IN  
SYSTEMS WILL MAKE  
LEADERSHIP **SIMPLER**

**THE  
HOT  
TAKE**





THINKING IN  
SYSTEMS WILL MAKE  
LEADERSHIP **SIMPLER**

**THE  
HOT  
TAKE(S)**



THINKING IN  
SYSTEMS WILL MAKE  
LEADERSHIP **SIMPLER**



THE SYSTEM THAT  
PEOPLE WORK IN MAY  
ACCOUNT FOR **90-95%**  
OF **PERFORMANCE**

**THE  
HOT  
TAKE(S)**

# Our Talk Today

# Our Talk Today

Understanding Systems  
Thinking

# Our Talk Today

Understanding Systems  
Thinking

Applying it in Engineering  
Leadership

# Our Talk Today

Understanding Systems  
Thinking

Applying it in Engineering  
Leadership

Not only in theory. In  
practice.

# 1. SYSTEMS THINKING

# Our Talk Today

Understanding Systems  
Thinking

Applying it in Engineering  
Leadership

Not only in theory. In  
practice.

**1. SYSTEMS  
THINKING**

**2. HOW TO  
USE IT IN  
PRACTICE**

# **Our Talk Today**

Understanding Systems  
Thinking

Applying it in Engineering  
Leadership

Not only in theory. In  
practice.



**1. SYSTEMS  
THINKING**

**2. HOW TO  
USE IT IN  
PRACTICE**

**3. REAL  
EXAMPLES**

# Our Talk Today

Understanding Systems  
Thinking

Applying it in Engineering  
Leadership

Not only in theory. In  
practice.

**1. SYSTEMS  
THINKING**

**2. HOW TO  
USE IT IN  
PRACTICE**

**3. REAL  
EXAMPLES**

**4. LEADING  
CHANGE**

# **Our Talk Today**

Understanding Systems  
Thinking

Applying it in Engineering  
Leadership

Not only in theory. In  
practice.

**1. SYSTEMS  
THINKING**

**2. HOW TO  
USE IT IN  
PRACTICE**

**3. REAL  
EXAMPLES**

**4. LEADING  
CHANGE**

# **Our Talk Today**

**Systems Thinking is a way of making sense of the complexity of the world by looking at it in terms of wholes and relationships rather than by splitting it down into its parts.**

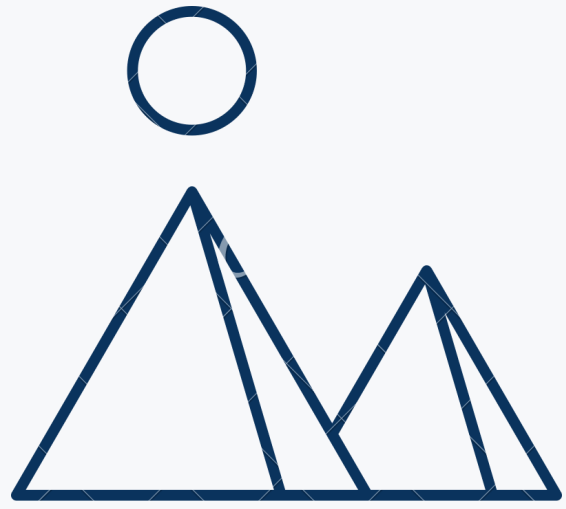
# **SYSTEMS THINKING**

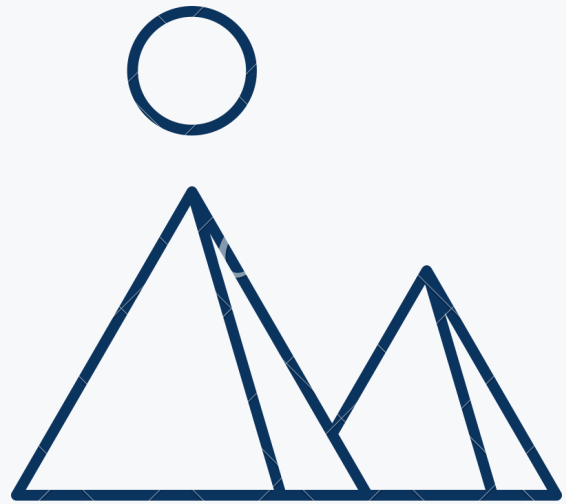
by Wikipedia

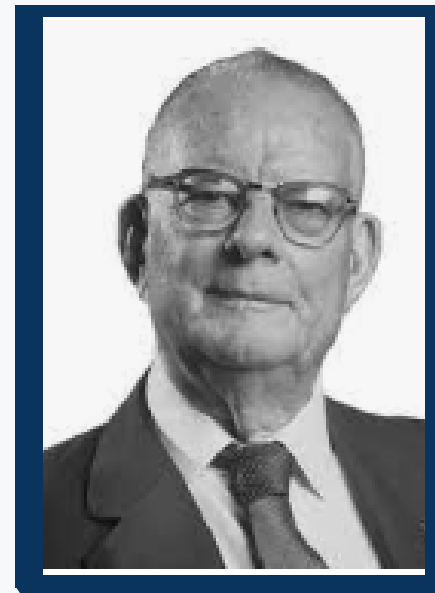
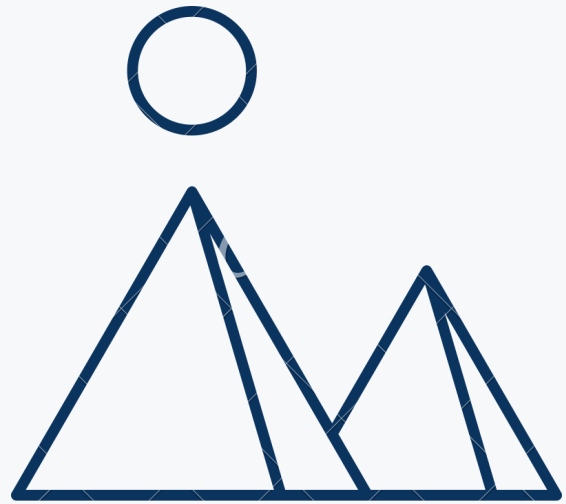
**Systems Thinking is a way of making sense of the complexity of the world by looking at it in terms of wholes and relationships rather than by splitting it down into its parts.**

# SYSTEMS THINKING

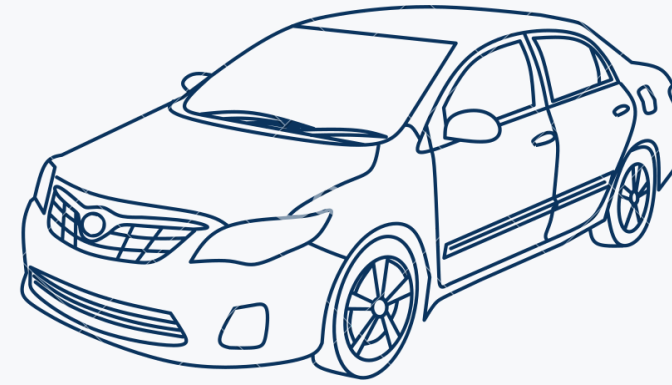
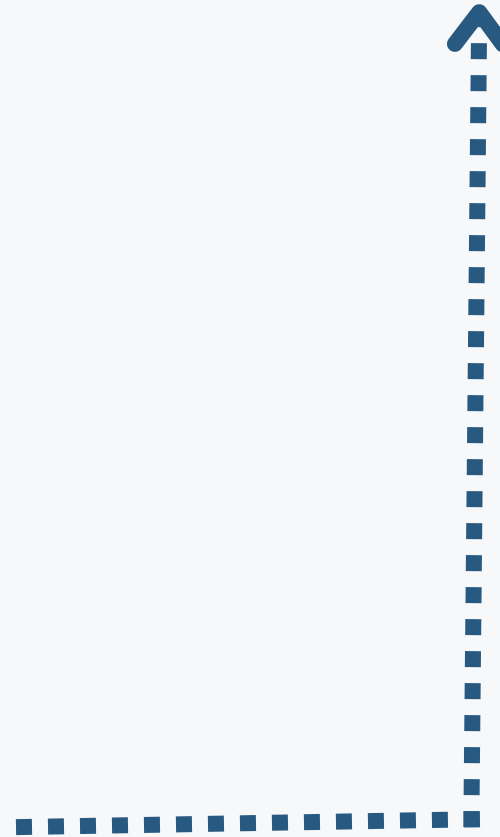
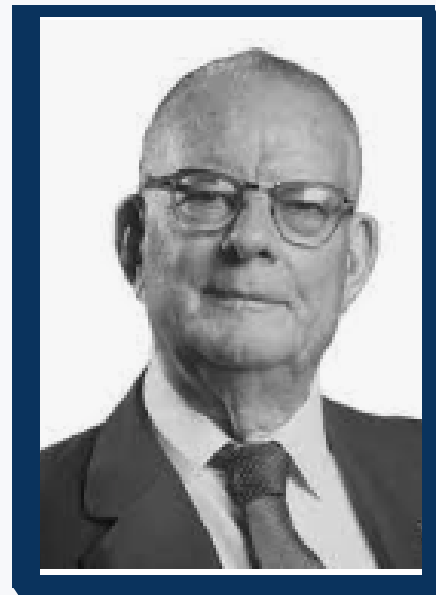
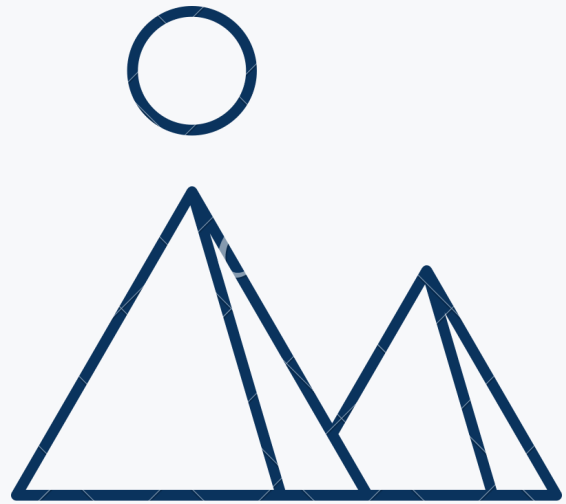
by Wikipedia

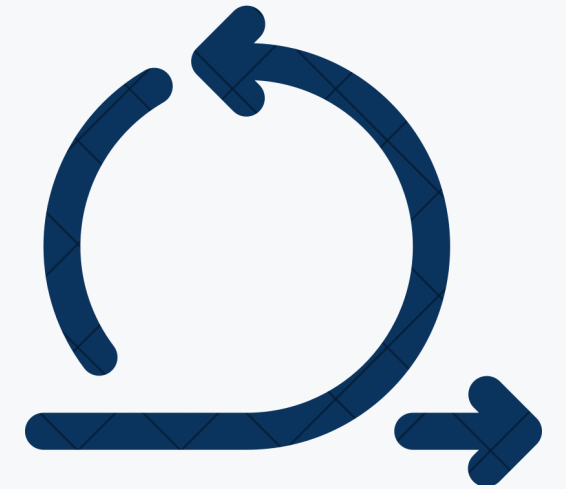
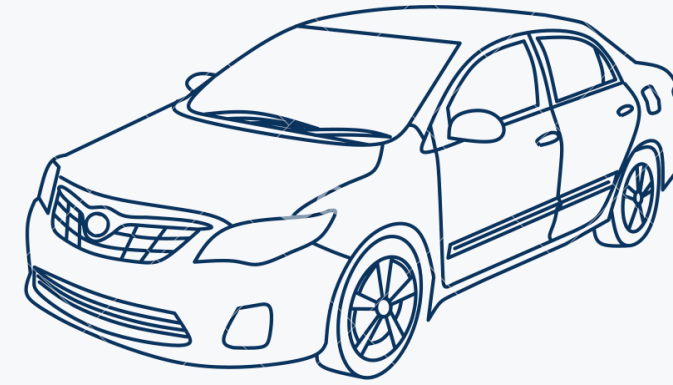
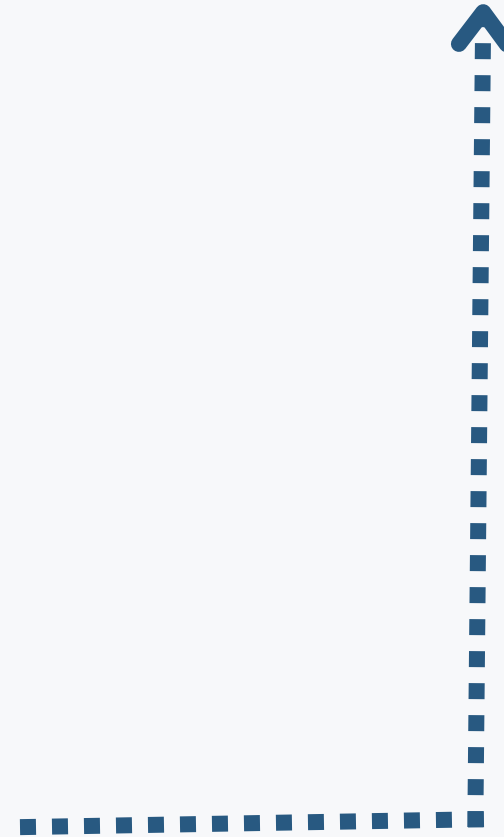
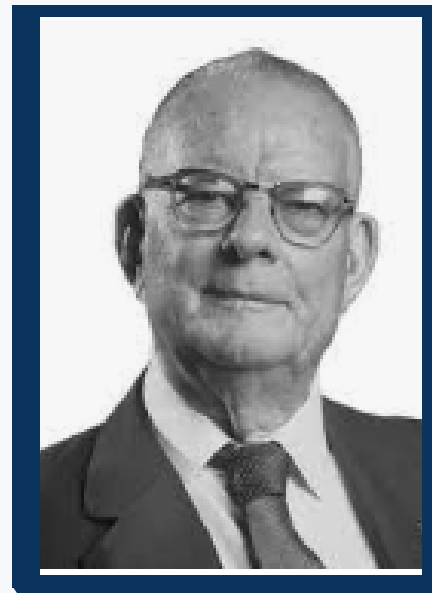
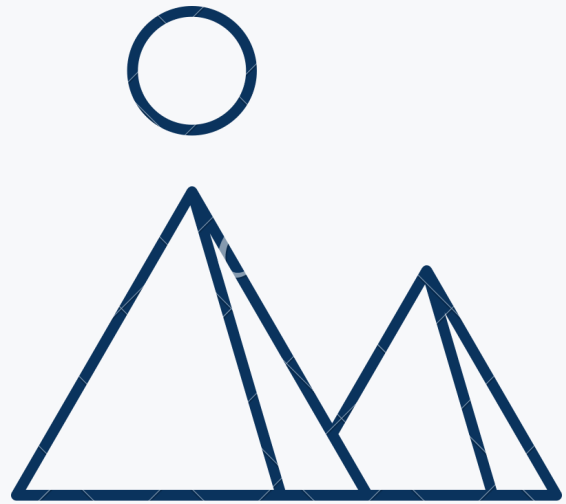












**“A bad system  
will beat a  
good person  
every time”**

W. DEMING





DAY 1

Dev  
Work

WAITING

DAY 2

Dev  
Work

WAITING

DAY 3

WAITING

DAY 4

WAITING

Review

DAY 5

Dev  
Work

WAITING

DAY 6

WAITING

Review

WAITING

DAY 7

WAITING

Dev  
Work

Review,  
Merge and  
Release

**Systems Thinking is a way of making sense of the complexity of the world by looking at it in terms of wholes and relationships rather than by splitting it down into its parts.**

# SYSTEMS THINKING

by Wikipedia







**Systems Thinking is**

**not about creating a  
restrictive system**

**about creating an  
effective system with  
space for people to  
achieve their full potential**

**SYSTEMS  
THINKING**

**1. SYSTEMS  
THINKING**

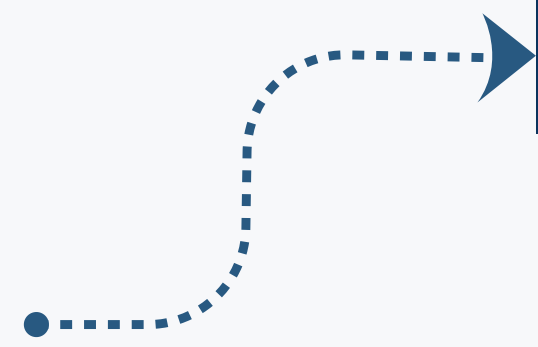
**2. HOW TO  
USE IT IN  
PRACTICE**

**3. REAL  
EXAMPLES**

**4. LEADING  
CHANGE**

# **Our Talk Today**

INPUTS



**YOUR TEAM  
AS A SYSTEM**



OUTPUTS

**How?**

# How?

1. Understand your objectives

# How?

1. Understand your objectives
2. Inspect the work as a series of systems

# How?

1. Understand your objectives
2. Inspect the work as a series of systems
3. Actively manage your team's systems

# 1. Team Goals





BE HIGHLY PRODUCTIVE  
AND CONTINUOUSLY  
IMPROVE



HAVE ENGINEERS THAT  
ARE FULFILLED AND  
GROWING IN THEIR  
CAREERS

## 1. Team Goals

## **2. Team Systems**



PRODUCT



ENGINEERING



PEOPLE

## 2. Team Systems



## PRODUCT

How does work go from idea to production?

How are requirements and tasks defined?

How is success defined?

## 2. Team Systems



# ENGINEERING

How are iterations managed?

How does a task go from creation to delivery?

How is quality verified?

## 2. Team Systems



PEOPLE

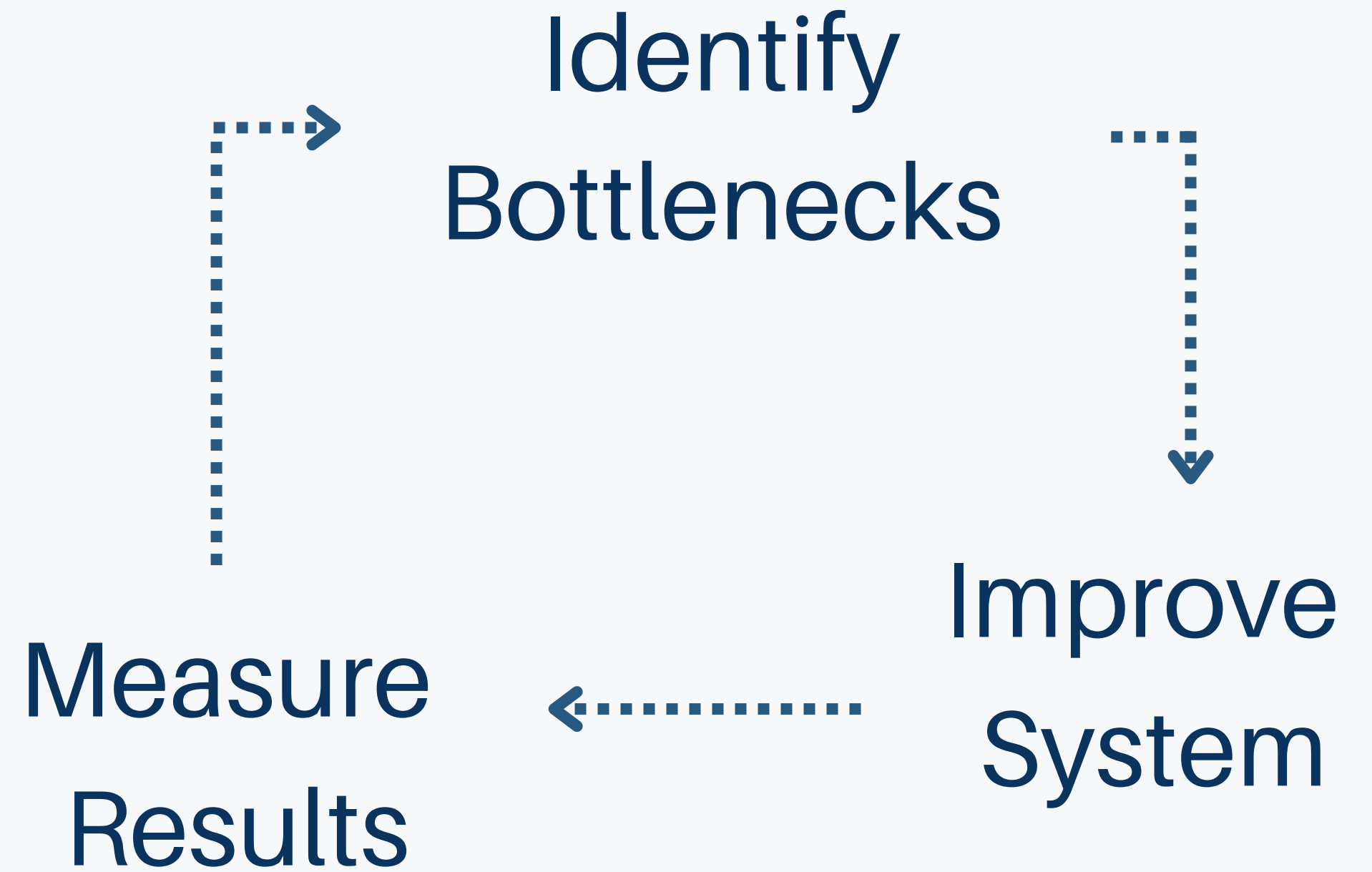
What are the feedback loops for engineers?

How does an engineer learn on the job?

How does career growth work?

## 2. Team Systems

# 3. Act



**1. SYSTEMS  
THINKING**

**2. HOW TO  
USE IT IN  
PRACTICE**

**3. REAL  
EXAMPLES**

**4. LEADING  
CHANGE**

# **Our Talk Today**



# Team Performance & Focus

“This team is not  
delivering well, they  
must be  
unmotivated”

# Team Performance & Focus

“This team is not  
delivering well, they  
must be  
unmotivated”



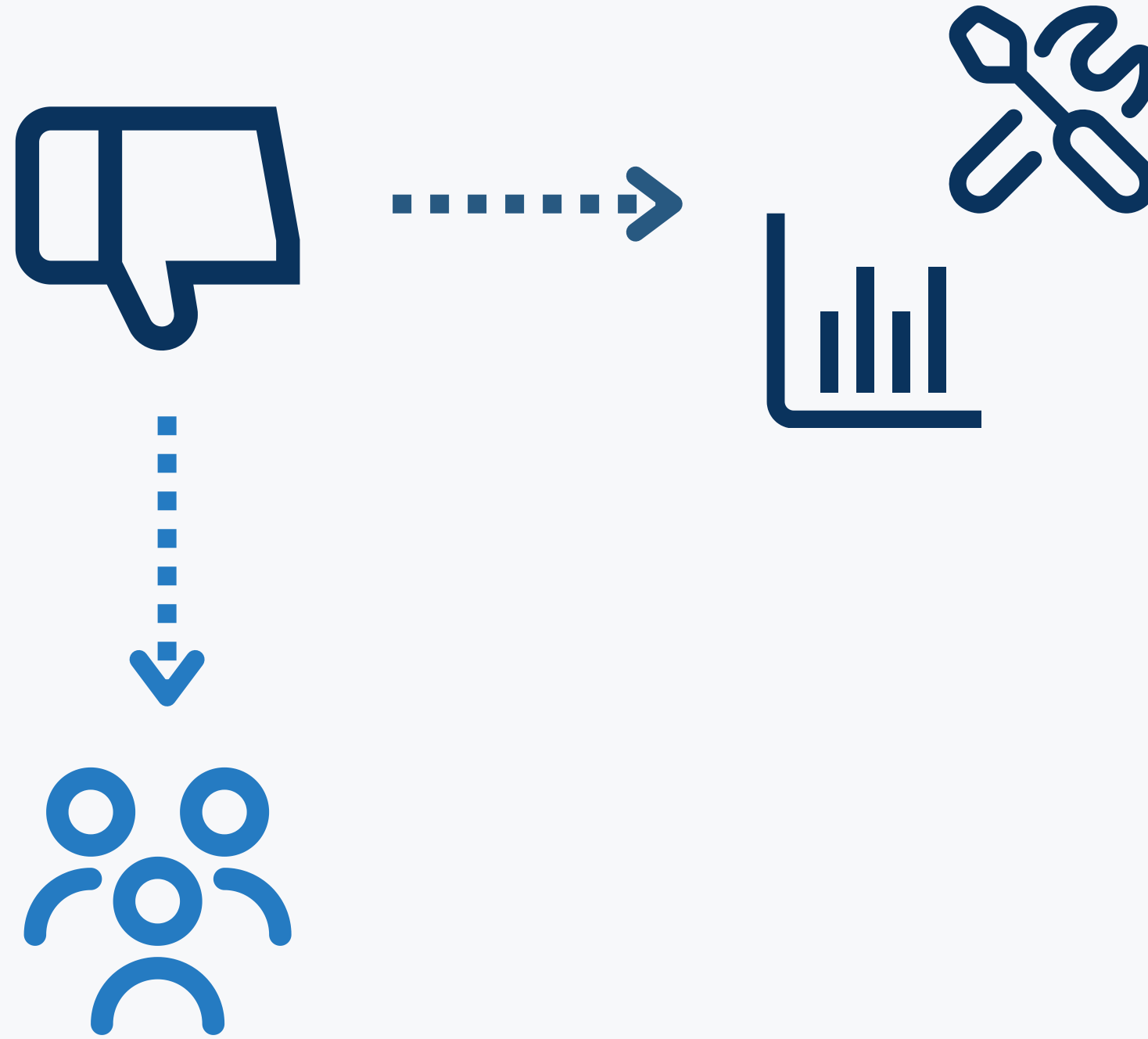
# Team Performance & Focus

“This team is not  
delivering well, they  
must be  
unmotivated”



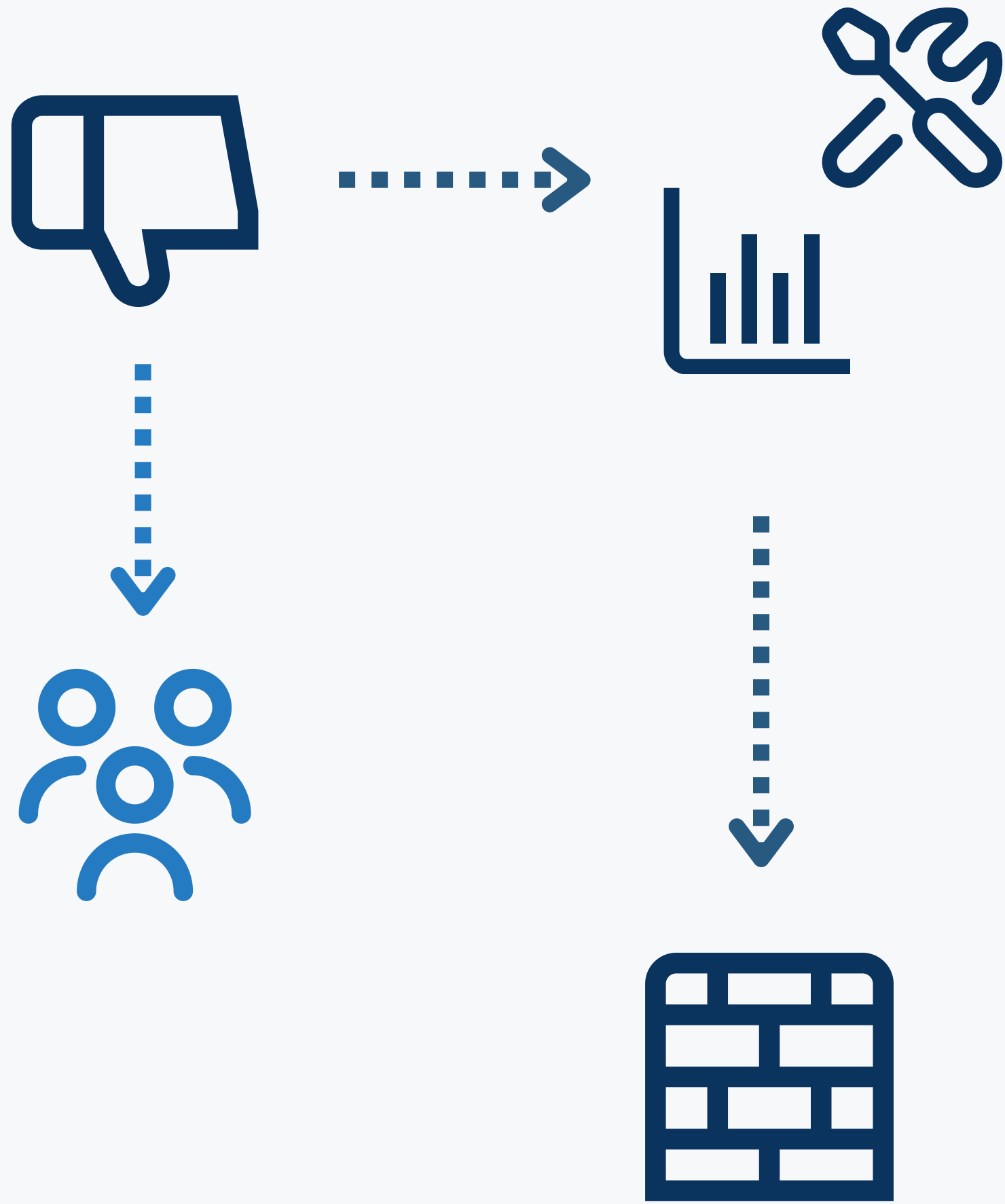
# Team Performance & Focus

“This team is not  
delivering well, they  
must be  
unmotivated”



# Team Performance & Focus

“This team is not delivering well, they must be unmotivated”



DAY 1

Dev  
Work

WAITING

DAY 2

Dev  
Work

WAITING

DAY 3

WAITING

DAY 4

WAITING

Review

DAY 5

Dev  
Work

WAITING

DAY 6

WAITING

Review

WAITING

DAY 7

WAITING

Dev  
Work

Review,  
Merge and  
Release

# Team Performance & Focus

“This team is not delivering well, they must be unmotivated”



# Team Performance & Focus

“This team is not delivering well, they must be unmotivated”



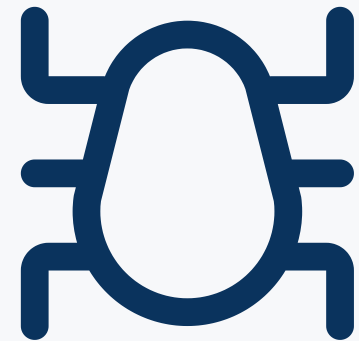


# Quality Issues vs. Requirements

“We are having too many bugs. We need to improve our QA process”

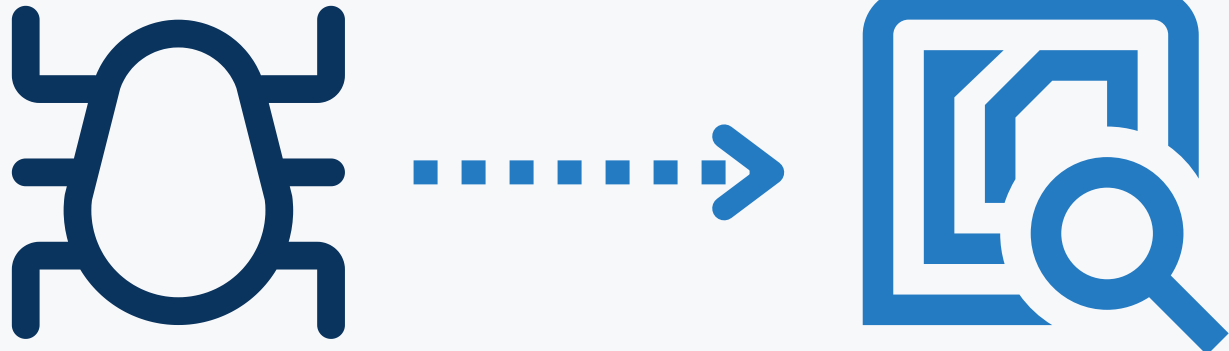
# Quality Issues vs. Requirements

“We are having too many bugs. We need to improve our QA process”



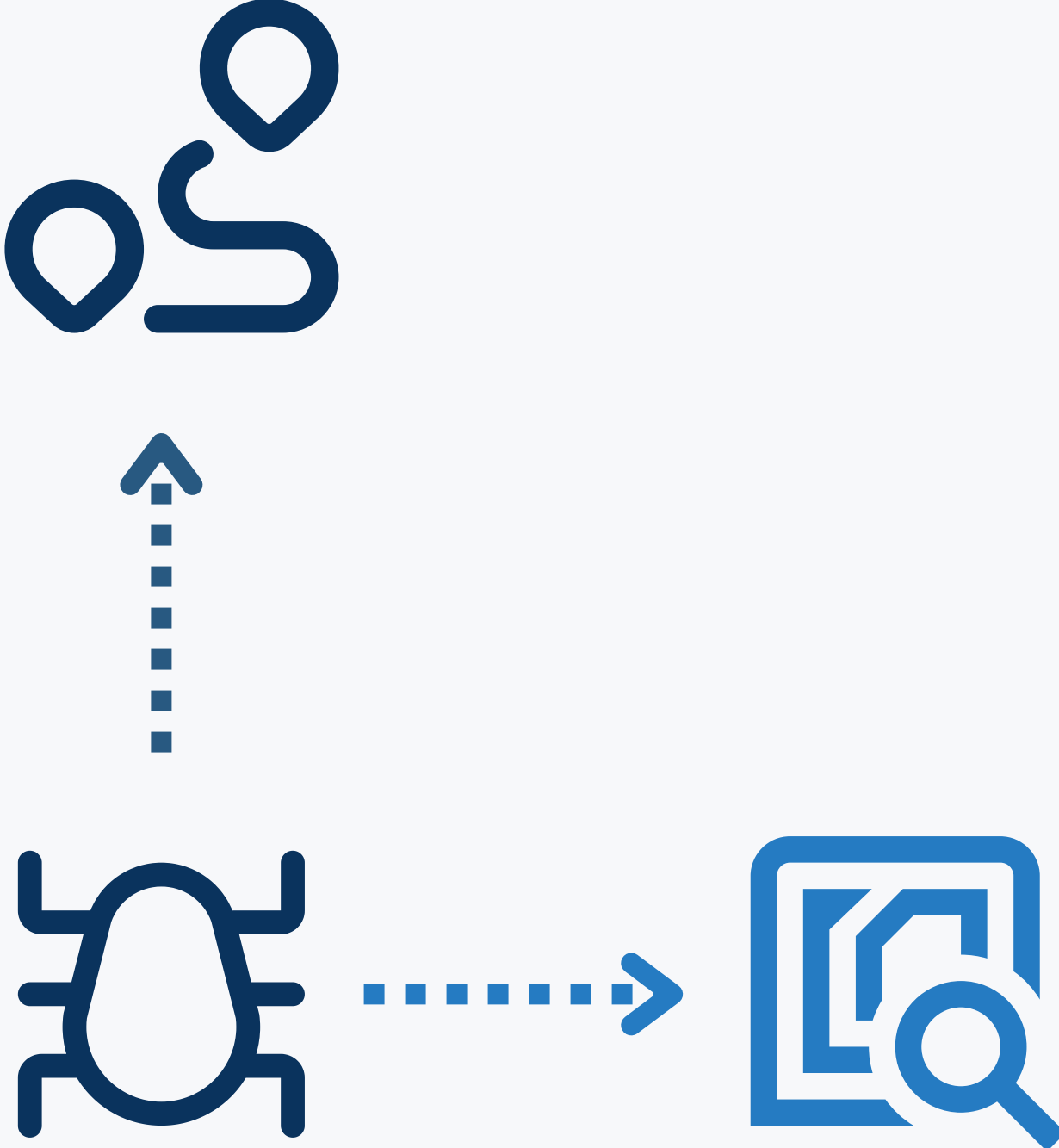
# Quality Issues vs. Requirements

“We are having too many bugs. We need to improve our QA process”



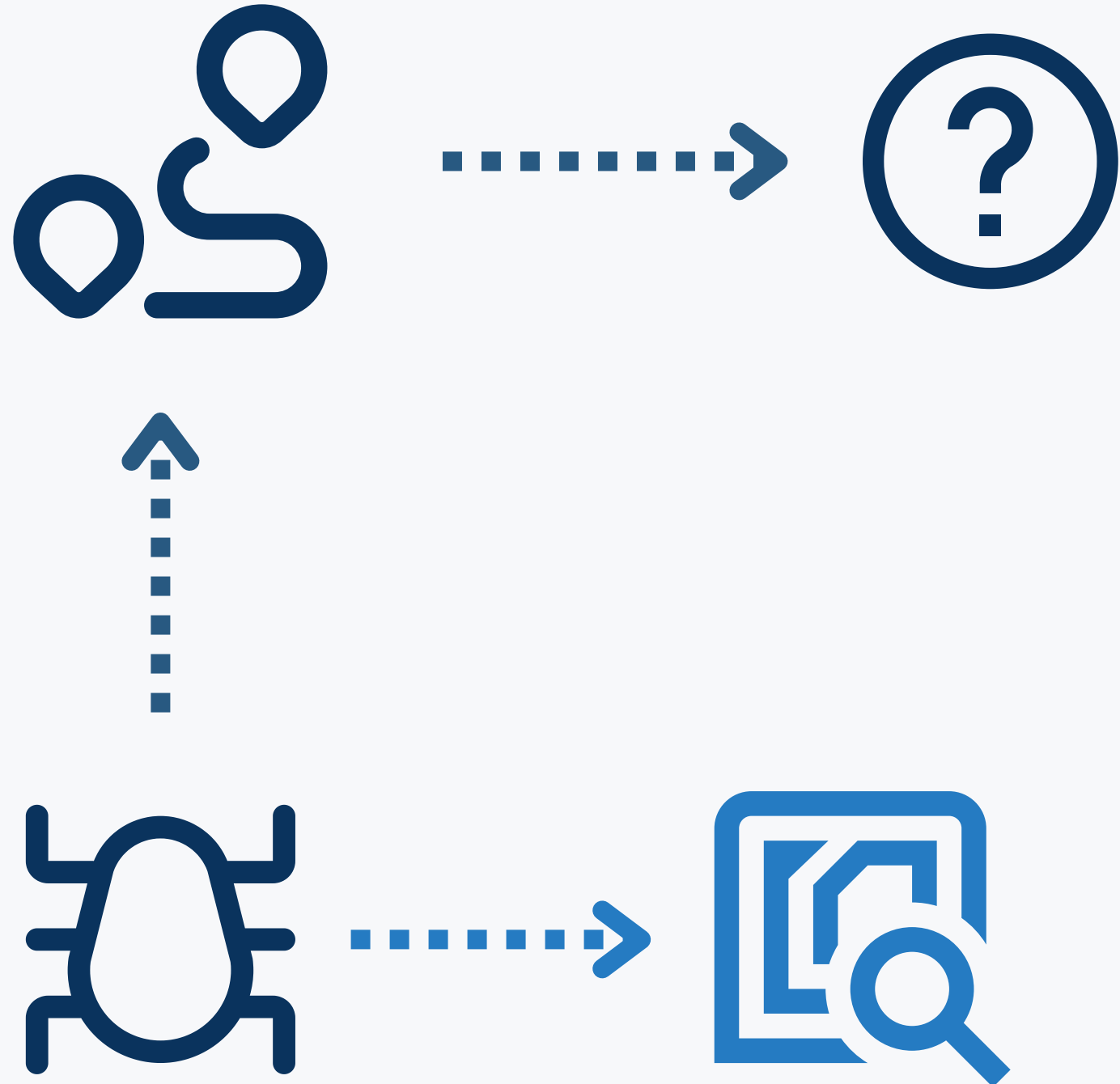
# Quality Issues vs. Requirements

“We are having too many bugs. We need to improve our QA process”



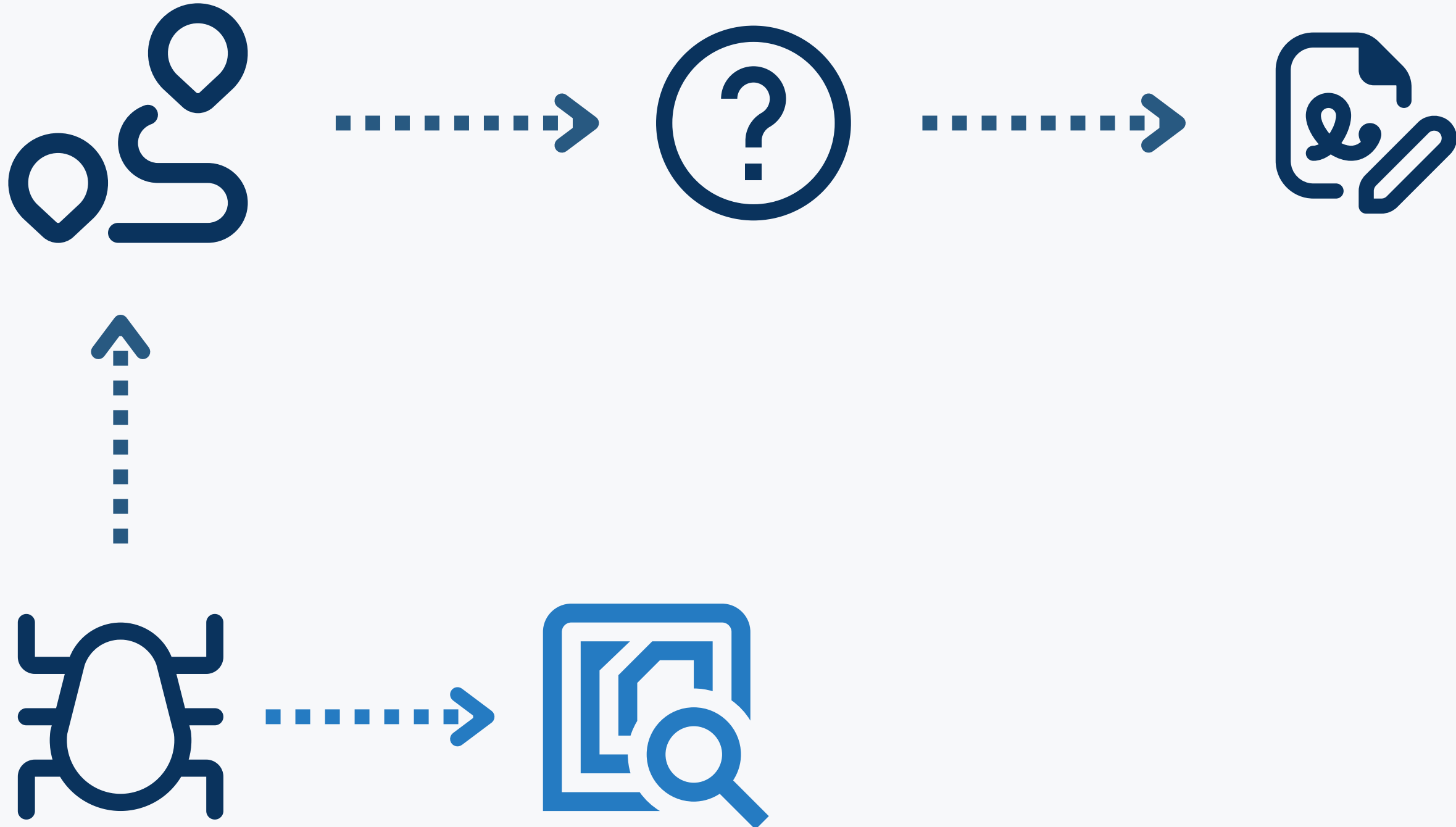
# Quality Issues vs. Requirements

“We are having too many bugs. We need to improve our QA process”



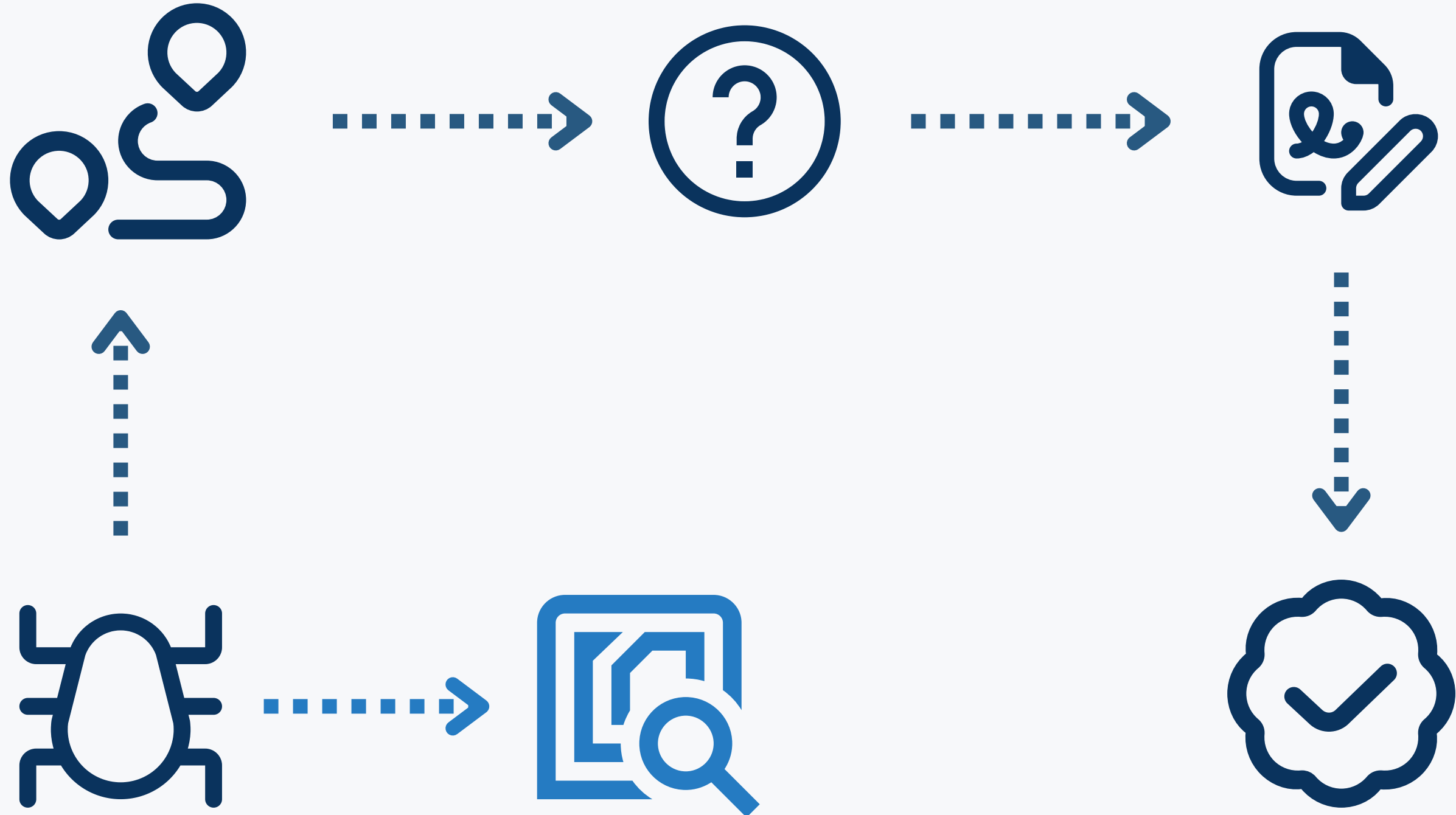
# Quality Issues vs. Requirements

“We are having too many bugs. We need to improve our QA process”



# Quality Issues vs. Requirements

“We are having too many bugs. We need to improve our QA process”



# Individual Performance vs. Collaboration

Someone is not performing well. We should manage their performance.



# Individual Performance vs. Collaboration

Someone is not performing well. We should manage their performance.



# Individual Performance vs. Collaboration

Someone is not performing well. We should manage their performance.



# Individual Performance vs. Collaboration

Someone is not performing well. We should manage their performance.



# Individual Performance vs. Collaboration

Someone is not performing well. We should manage their performance.



# Individual Performance vs. Collaboration

Someone is not performing well. We should manage their performance.



# Individual Performance vs. Collaboration

Someone is not performing well. We should manage their performance.



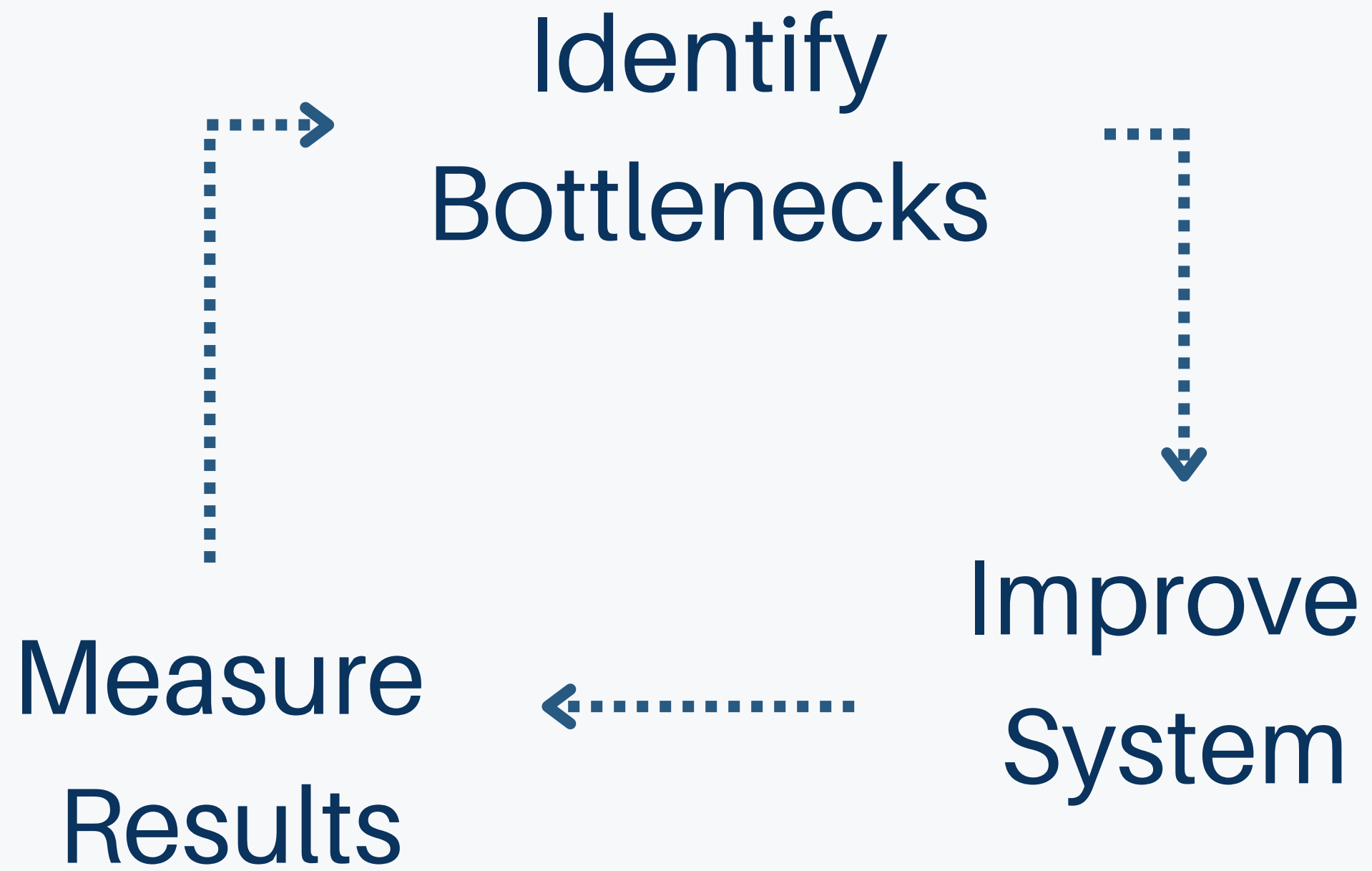
**1. SYSTEMS  
THINKING**

**2. HOW TO  
USE IT IN  
PRACTICE**

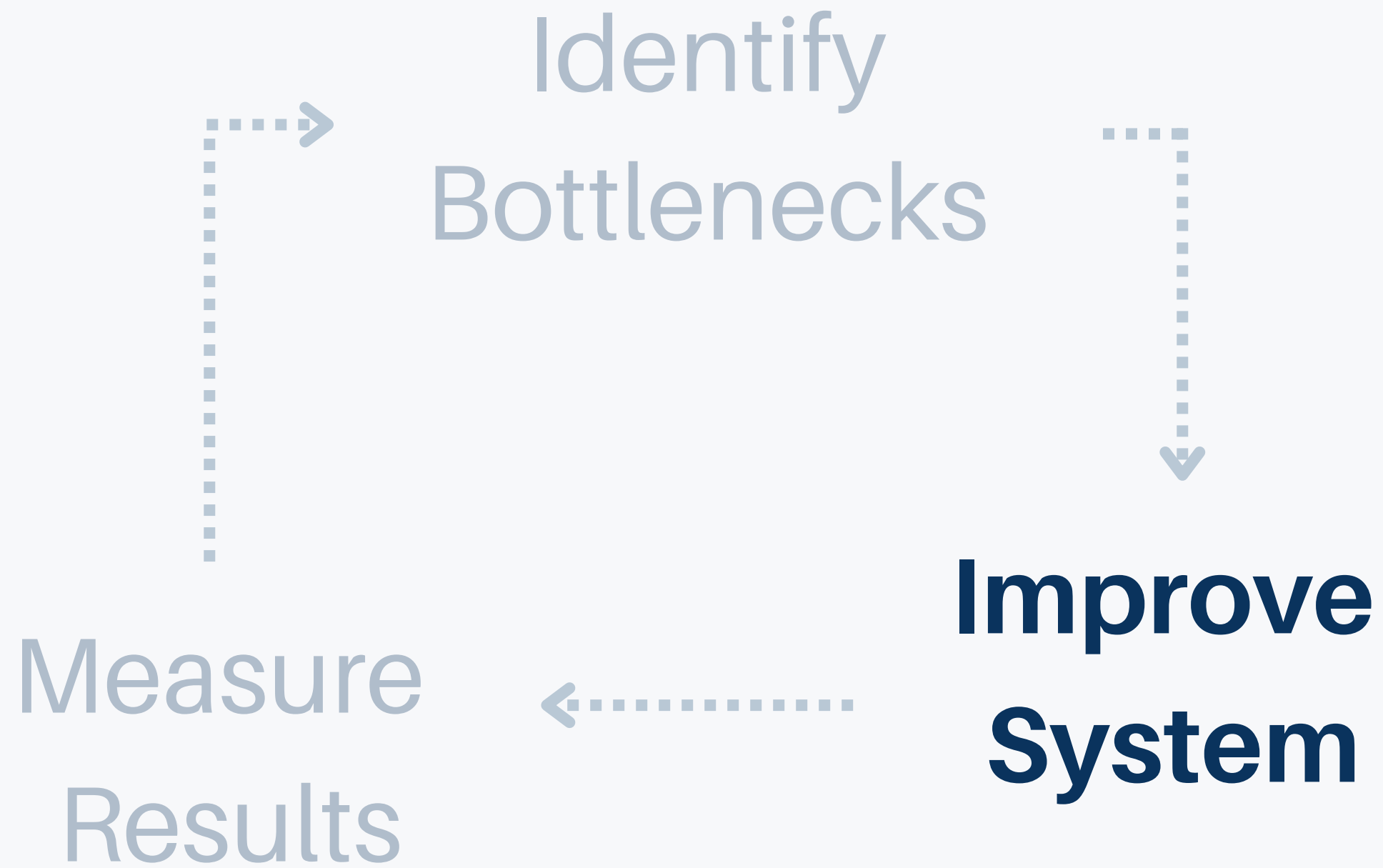
**3. REAL  
EXAMPLES**

**4. LEADING  
CHANGE**

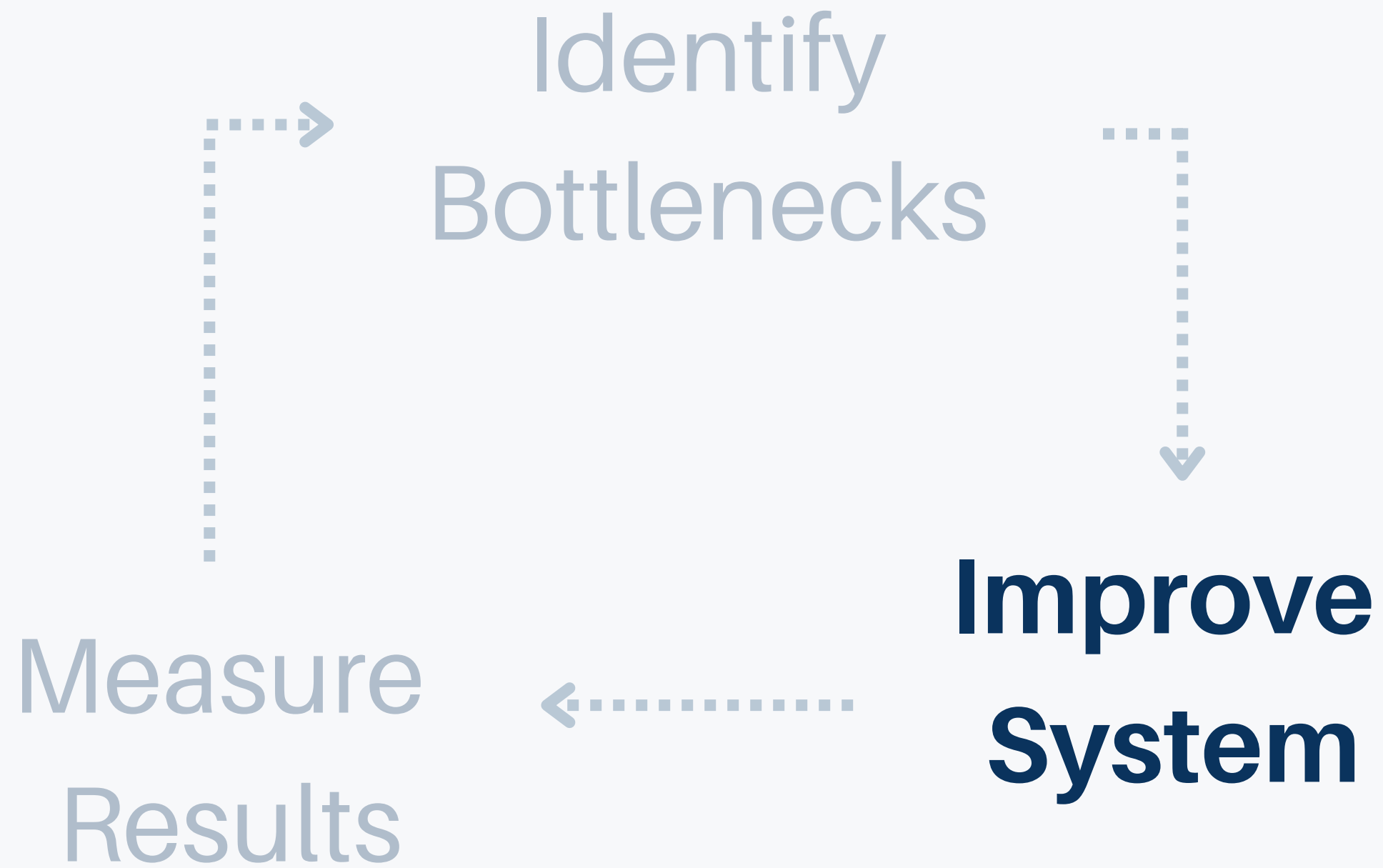
# **Our Talk Today**





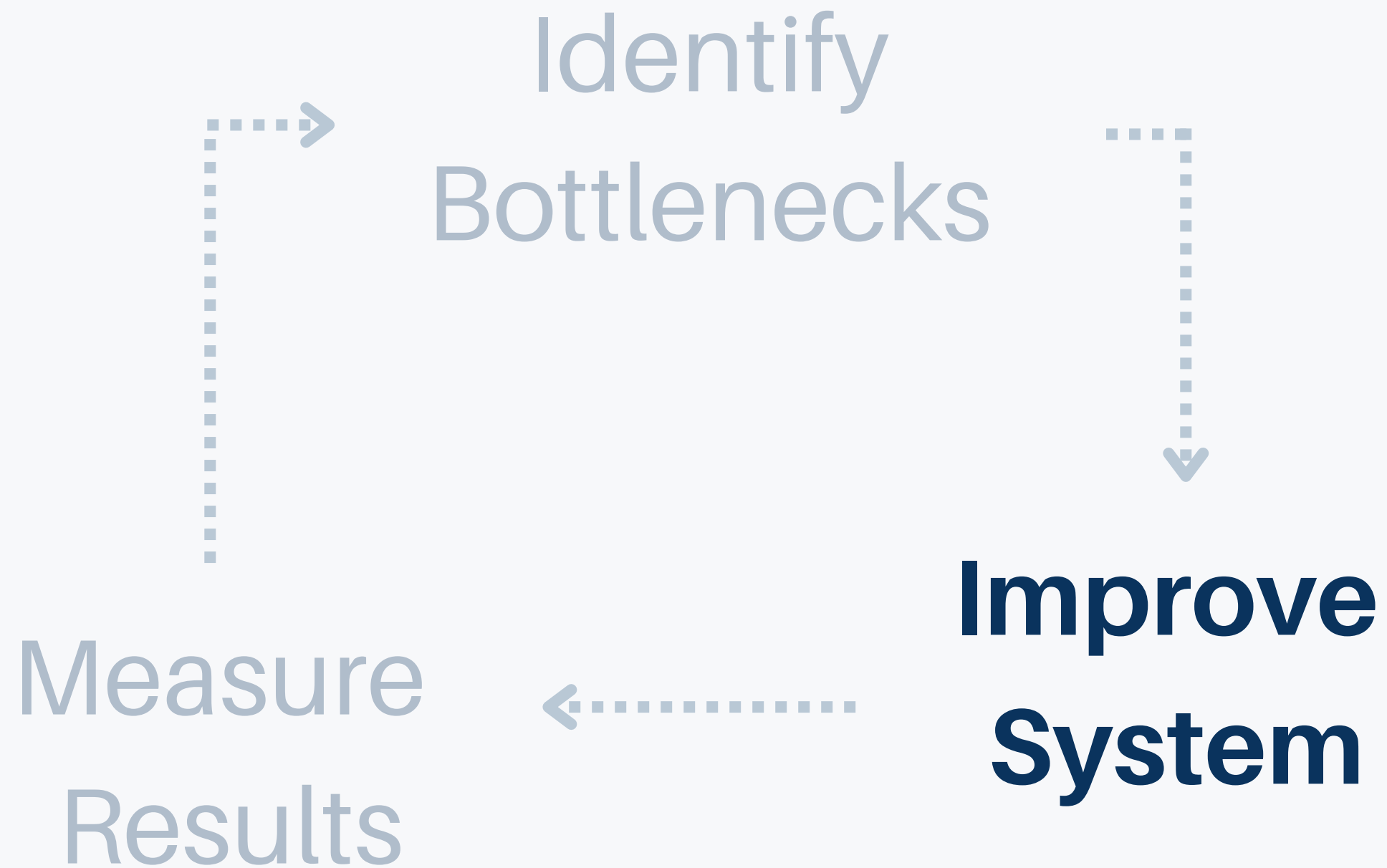


**Leading change  
can be  
challenging**



**Leading change  
can be  
challenging**

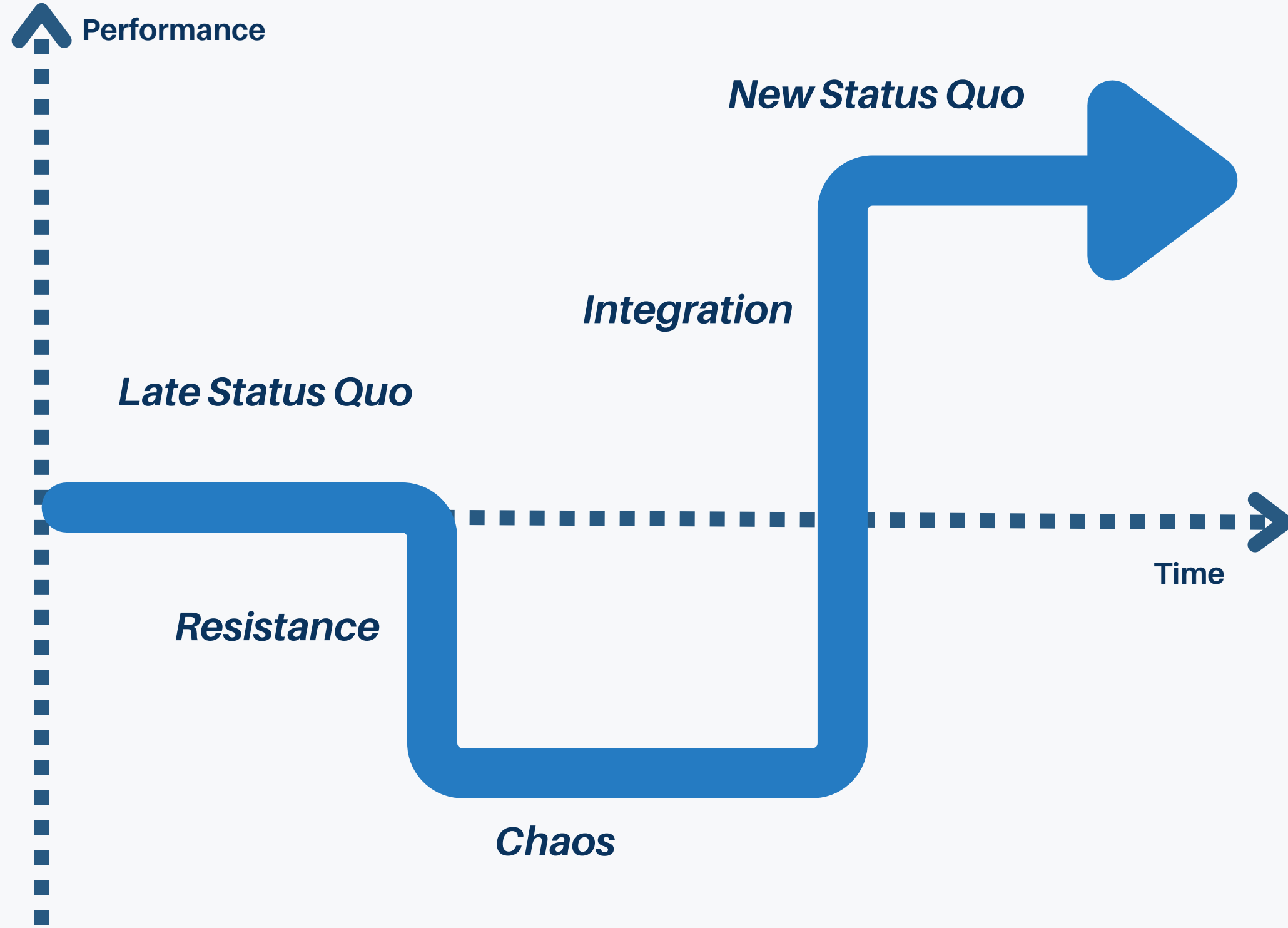
It relies on a vision



**Leading change  
can be  
challenging**

It relies on a vision

It requires time



*Satir Change Model*

Leading change  
can be  
challenging

It relies on a vision

It requires time

Team Results <> Individual  
Results

**Leading change  
can be  
challenging**

It relies on a vision

It requires time

Team Results <> Individual  
Results

Team Efficiency <>  
Individual Efficiency

**Leading change  
can be  
challenging**

It relies on a vision

It requires time

Team Results <> Individual  
Results

Team Efficiency <>  
Individual Efficiency

The tech industry is setup  
for individual productivity

**Leading change  
can be  
challenging**

It relies on a vision

It requires time





**Building an effective team  
is the main job of the EM.**

**Building an effective team  
is the main job of the EM.**

**An effective team will  
push all its members  
forward**

*“A company could put a top man at every position and be swallowed by a competitor with people only half as good, but who are working together.”*

*~W. Edwards Deming*

LEADING CHANGE

**Value team  
results over  
individual  
results**

*“All we are doing is looking at the timeline, from the moment the customer gives us an order to the point when we collect the cash. And we are reducing the timeline by reducing the non-value-adding wastes.”*

*~ Taiichi Ohno*

LEADING CHANGE

**Observe and  
understand the  
work**

*“Many managers are not executives. Many people, in other words, are superiors of other people and still do not seriously affect the ability of the organization to perform. [...] They are ‘overseers’ in the literal sense of the work.”*

*~Peter Drucker*

LEADING CHANGE

**Be accountable  
& lead toward  
results**

**1. SYSTEMS  
THINKING**

**2. HOW TO  
USE IT IN  
PRACTICE**

**3. REAL  
EXAMPLES**

**4. LEADING  
CHANGE**

# **Our Talk Today**

**Understand  
your team  
goals**

**Understand  
your team  
goals**

**Become an  
expert on the  
work**



**Understand  
your team  
goals**

**Become an  
expert on the  
work**

**Act on the  
system**

**Understand  
your team  
goals**

**Become an  
expert on the  
work**

**Act on the  
system**

**Actively lead  
change**

***Not all team members will identify the same critical issues, nor will they think of the same solutions, even if they did. Some solutions will result in more critical issues.***

***Out of this intellectual cacophony, the leader has to do the work of comparing and contrasting concepts, integrating proposals, answering and asking questions, correcting misunderstandings, providing due recognition, sequencing input, and finally, producing a plan of action to achieve the purpose.***

*Systems Leadership: Creating Positive Organizations*

**THANK  
YOU**



 [MEDIUM.COM/FRANCISCOMT](https://medium.com/franciscomt)

 [FRANCISCOMT](https://www.linkedin.com/company/franciscomt)

 [@FRANKMT](https://twitter.com/frankmt)

*“We'll get him  
when he comes  
back in!”*

*“He's not coming  
back.”*

