



Managing To Learn:

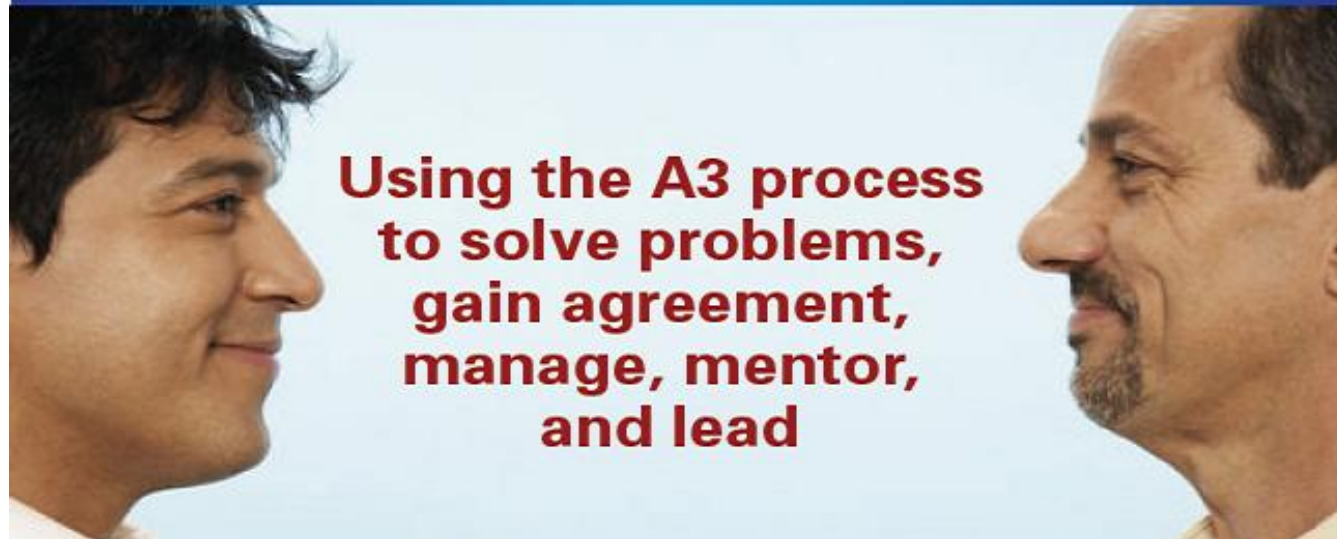
Using the A3 as a mentoring/ coaching process

Instructors: Shook & Brunt



Learning Together ...as mentors and mentees

Managing to Learn



**Read, write, present, discuss,
question, coach, revise, understand**

Thought Question

What makes
an A3
a good one?



Thought Question

What makes a good A3 good?

– Deceptively simple...



The A3 Process - Review

As a standard process, the A3

- makes it easier for you
 - to engage others, and
 - to understand others
- fosters dialogue within the organization
- forces “5S for information”
- develops thinking problem-solvers
- encourages front-line initiative

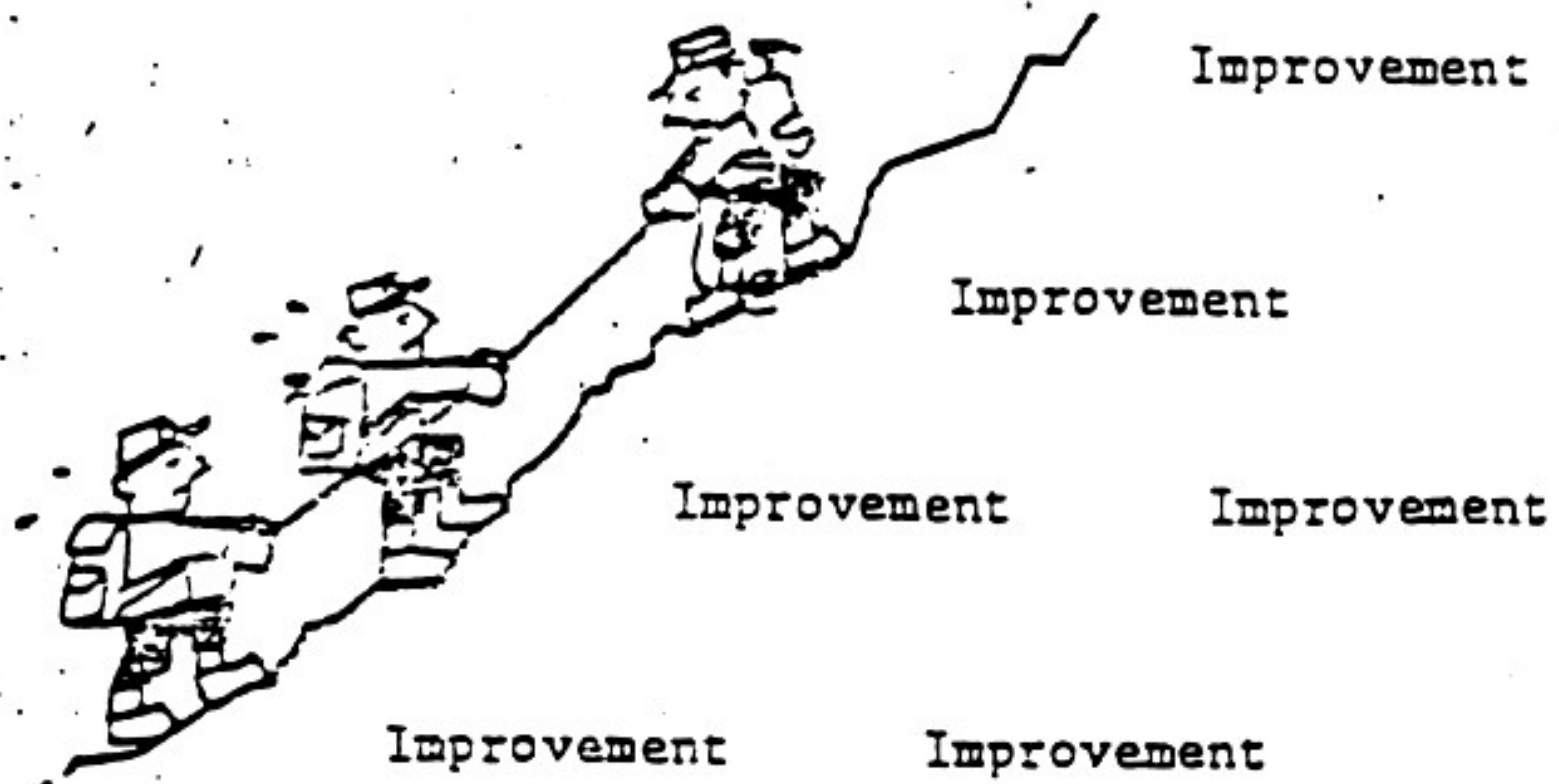


The A3 Process...

- encourages PDCA
- clarifies the link between true problems and countermeasures
- serves as an organizational learning tool.
- leads to effective countermeasures and solutions based on facts and data.

The Lean Leadership Challenge:

- Get the work done and
- Develop Your People
- at the **SAME TIME!**



The A3 Mgmt Process

The Tool:

The A3 format for communicating, solving problems, planning, reporting, discussing – and more...

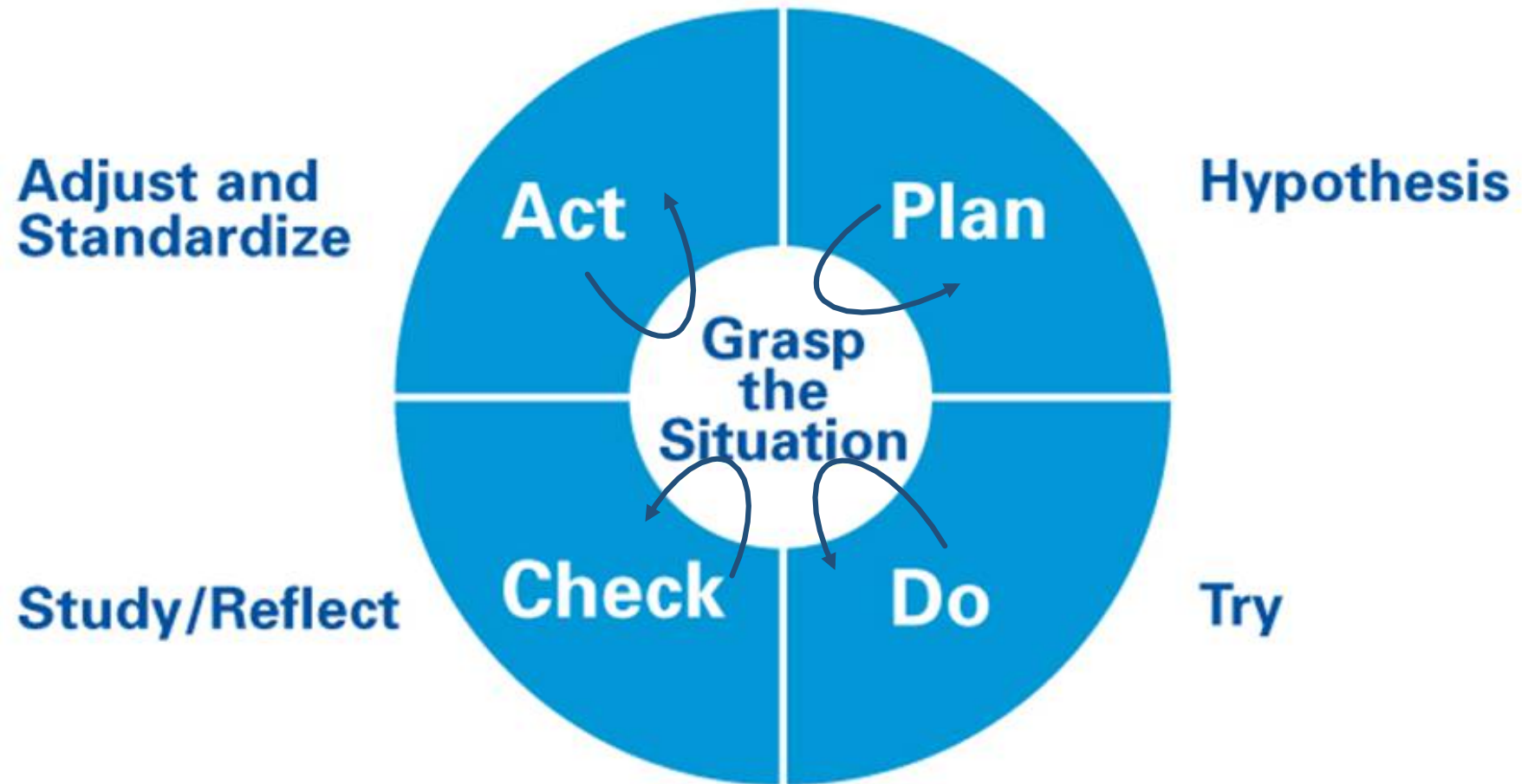
The Process:

The PDCA management and learning cycle for proposing improvements and managing their implementation – and more...



Plan-Do-Check-Act Management Cycle

From pDpD (try, fail, try, fail)
to PDCA cycle



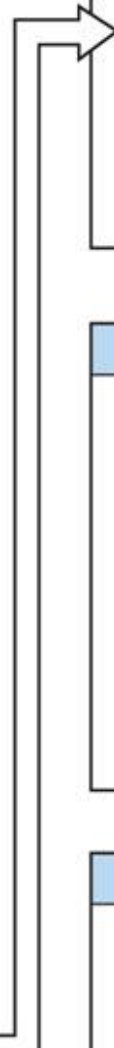
The A3 Thinking Steps

1. What is the problem...the "Real" problem?
 - Why does it need to be addressed...now?
2. Who owns the problem?
3. What is the root cause of the problem?
4. What are some possible countermeasures?
5. How will you choose which countermeasure to propose?
6. How will you get agreement among everyone concerned?
7. What is your implementation plan? What timetable?
8. How will you know if your countermeasure works?
9. What implementation issues can you anticipate?
10. How will you ensure follow up & continuous improvement?

Title: What are you talking about?

I. Background
Why are you talking about it?
↓
II. Current Conditions
Where do things stand today?
- Show visually using charts, graphs, drawings, maps, etc.
.....
What is the problem?
↓
III. Goals/Targets
What specific outcomes are required?
↓
IV. Analysis
What is the root cause(s) of the problem?
- Choose the simplest problem-analysis tool that clearly shows the cause-and-effect relationship.

Owner/Date				
V. Proposed Countermeasures				
What is your proposal to reach the future state, the target condition?				
How will your recommended countermeasures affect the root cause to achieve the target?				
↓				
VI. Plan				
What activities will be required for implementation and who will be responsible for what and when?				
What are the indicators of performance or progress?				
- Incorporate a Gantt chart or similar diagram that shows actions/outcomes, timeline, and responsibilities. May include details on specific means of implementation.				
↓				
VII. Followup				
What issues can be anticipated?				
- Ensure ongoing PDCA.				
- Capture and share learning.				



Porter's First A3:

Rush to a Solution



Create Robust Process for Translating Documents

I. Background

New domestic plant expansion has massive technical requirements that must be translated from Japanese documents to English. The size and complexity of the project are creating errors and delays.

II. Current Conditions

Cost overruns, delays, and errors due to:

- Sheer volume of documents.
- Multiple and varied vendors (pricing, quality, ease).
- Involvement of various departments and working styles.

III. Goals/Targets

- Simplify and standardize the process.
- Reduce costs by 10%.

IV. Analysis

- Challenge of translating from Japanese to English.
- Multiple varied vendors create a complex, nonstandard process.
- Overall improvement can be defined by reduction in cost overruns.

V. Proposed Countermeasures

Simplify and improve process performance by choosing one vendor based on competitive bid process.

VI. Plan

Evaluate current vendor.
Identify new vendor candidates.
Develop bid package, distribute, and choose winning bid.

VII. Followup

Monitor cost to proposal.
Review performance at end of one-year contract.
Put contract up for bid again if performance goals are not met.

DP
6/1/08

Questions for Porter's 1st A3

1. Would you agree to sign this A3 if you were Porter's manager?
2. What is Porter claiming in his A3?
3. What does he (and what do you) actually know?
4. What is Porter ASSUMING?
5. What is Porter not grasping about the situation?
6. What does Porter need to do next?

As Sanderson...

1. What were you thinking upon hearing Porter's A3?
2. How did you decide what to do?
3. What is your objective?

Questioning Mind

- What do you actually know?
→ How do you know it?
- What do you need to know?
→ How can you learn it?
- ***Lean is not acting on assumptions or jumping to conclusions.***

Go See...and Listen

“Data is of course important, but I place greater emphasis on facts.”

-Taiichi Ohno

***And where do you find the FACTS of a situation?
At the Gemba – the place where the problem is
actually happening. Not in a conference room or
at a desk.***

Grasp the actual condition firsthand

Three Common Problems in Problem Solving

1. Assuming you know what the problem is without seeing what is actually happening.
2. Assuming you know how to fix a problem without finding out what is causing it.
3. Assuming you know what is causing the problem without confirming it.

***In other words - Not Grasping the Situation.
(And where do we grasp the situation? At the gemba!)***

Porter's Second A3:



What's the Situation?

What's the Need?

Questions for Porter's 2nd A3

1. How is Porter's 2nd A3 better problem solving than his 1st attempt?
 - a) What pitfalls in problem solving thinking does Porter avoid this time?
2. What did Porter learn and how did he learn it?
3. What does he still need to work on to have a better grasp of the problem situation and his responsibility?

Deliver Perfect Translations

I. Background

Acme plant to double capacity!
 → **Much document translation required!**

- Poor English translations of Japanese documents caused many problems at original plant startup.
- Expansion plans call for aggressive launch timeline and cost reduction.

Production capacity: Current (0000) → Expansion (0000)

Document translation: Documents 6,000 pages

Timeline: Now (12 months) → Begin translation (6 months) → Launch

Translators: taunani! Budget cut by 10%

→ Document translation problems could impede plant launch!

II. Current Conditions

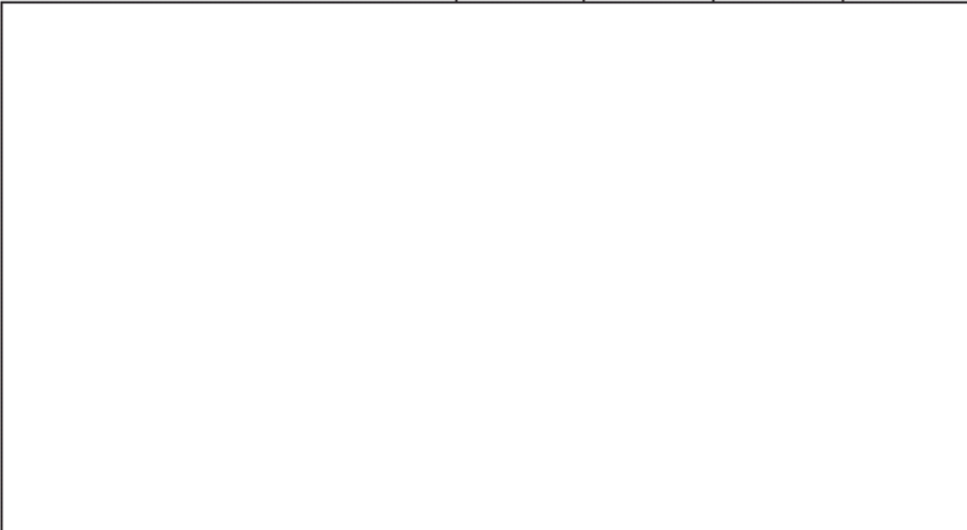
Documents by department

Documents by type

Problems in document translation at time of initial plant launch:

- Cost = High
- Delivery = Highly variable
- Quality = Many errors!

→ Problems in document translation process have not been corrected!



“A Problem Clearly Defined Is Half Solved”

❖ *What do we mean by “clearly defined”?*

- Gap between what is actually happening (current condition) and what should be happening (target condition) - described in performance terms.
- Gap broken down to concrete conditions that are contributing to the Gap & can be investigated first hand through direct observation.

Perception of presenting problem

Clarify the problem



"Real" problem



Understand the way work is done



Gemba

Why? → Direct cause

Why? → Cause

Why? → Cause

Why? → Cause

Why? → **Root cause**

↑
Countermeasures

Grasp the situation

What is the actual problem in performance?

→What is the GAP?

→How can you measure it?

Problem breakdown

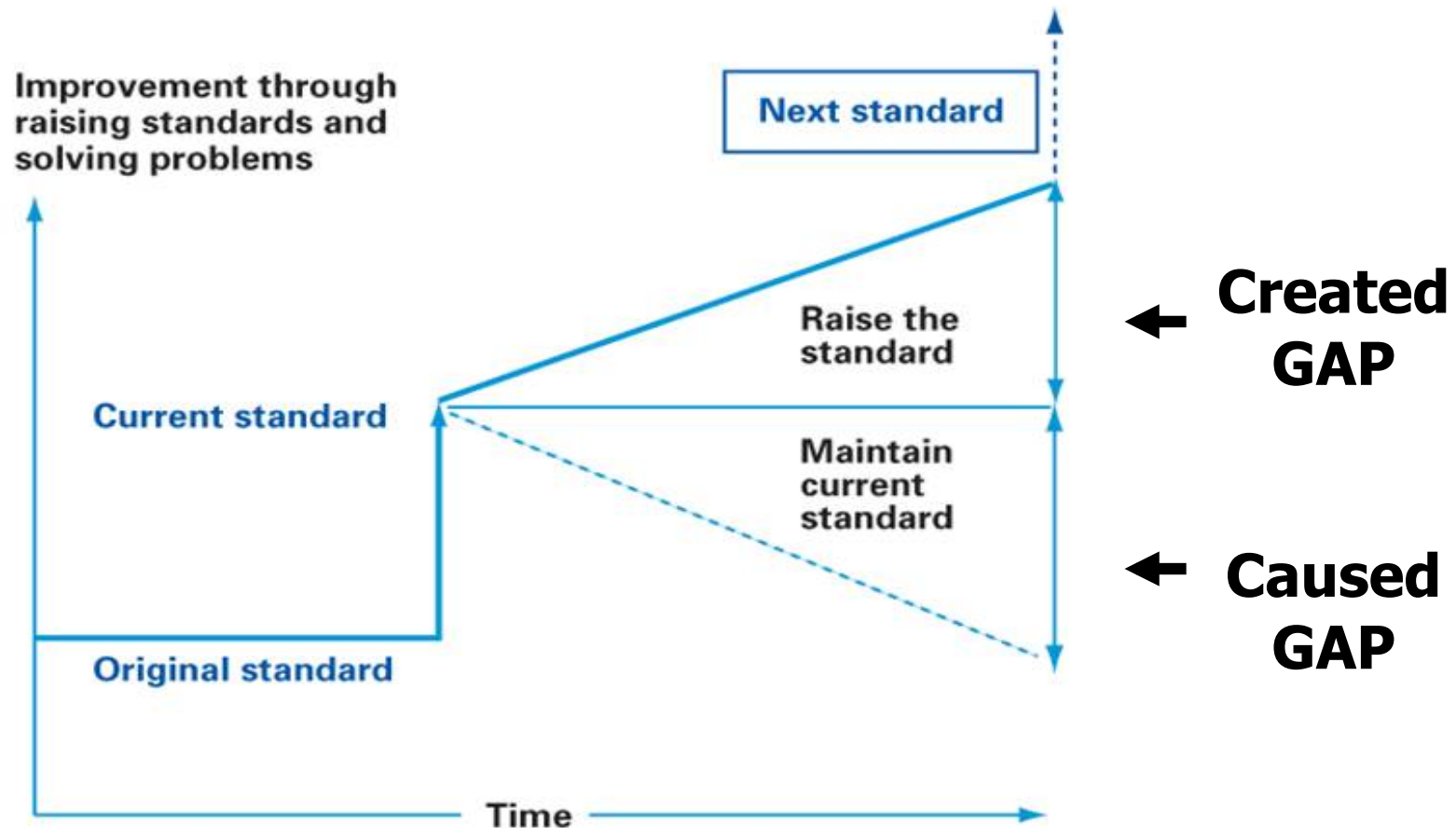
Go to the gemba, get the facts first-hand, analyze them thoroughly and objectively.

Cause investigation

Determine the root cause of *why* the problem is occurring.

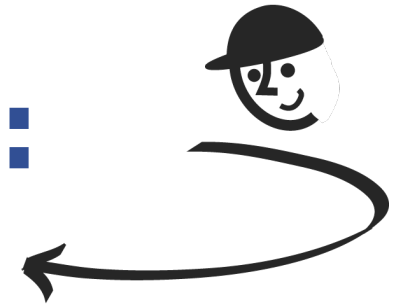
A GAP: The Two Types of Gaps:

What is the Problem?



A problem is any performance other than desired performance at any given time.

Porter's Third A3:



**Break Down to Goals,
Analysis to Root Cause**

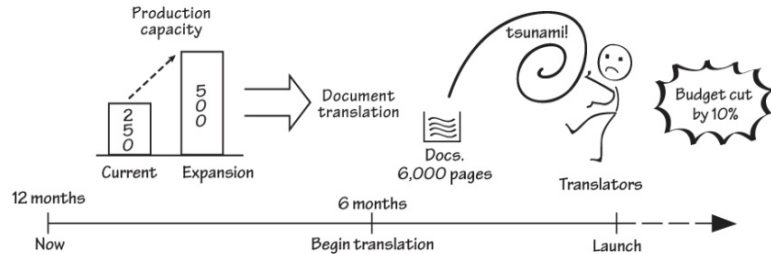
Support Launch Objectives with Accurate, Timely Document Translation

I. Background

Acme plant to double capacity!

➔ Much document translation required!

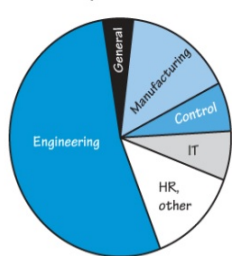
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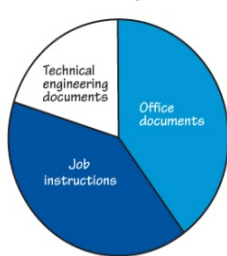
➔ Document translation problems could impede plant launch!

II. Current Conditions

Documents by department



Documents by type



Problems in document translation at time of launch:

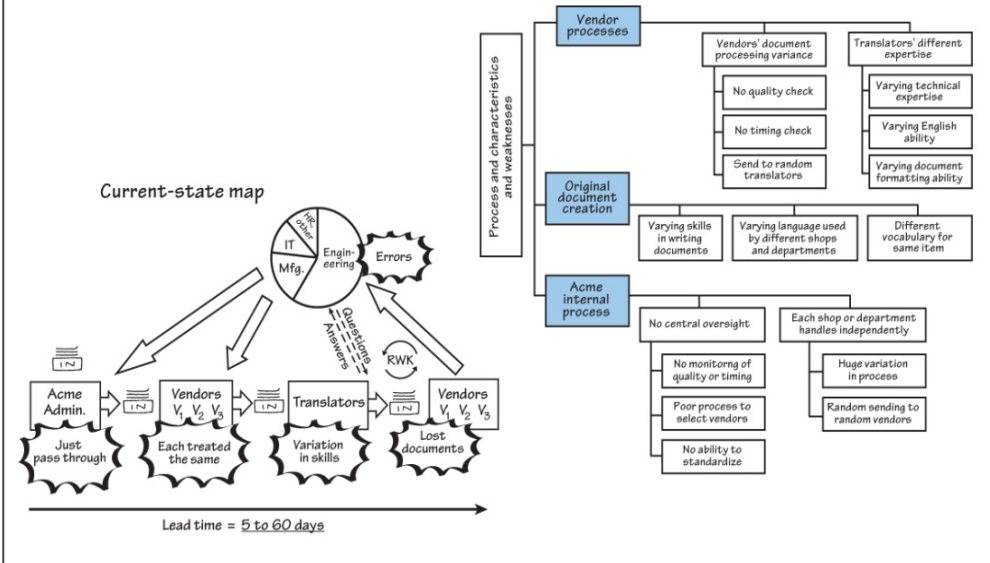
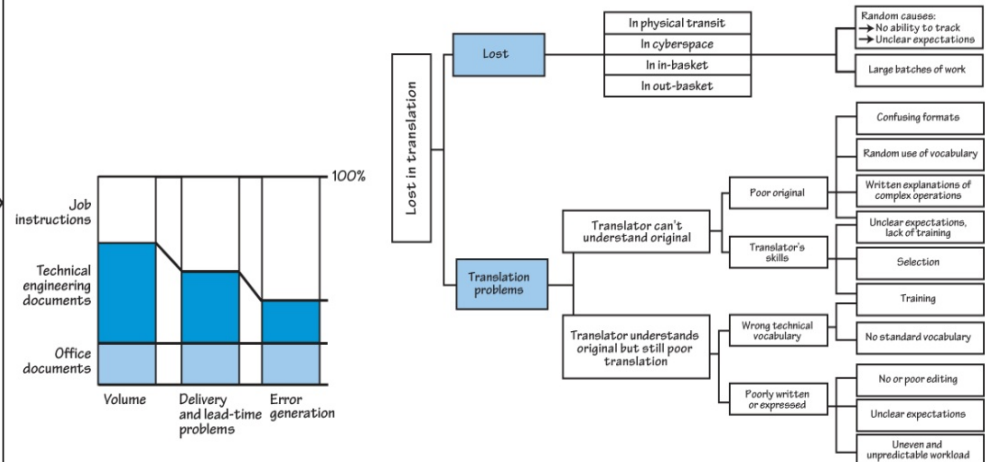
- Cost = 10% over budget
 - Delivery = Over 50% late
 - Quality = Much rework > 50%
 - Overall = Constant expediting
- Long, variable lead times
Many errors reach customer
Poor quality
Much rework
Overtime
Everyone unhappy

➔ Problems in process have not been corrected!

III. Goals/Targets

- Quality** - 0 defects at launch
- Rework less than 10%
- Delivery** - 100% on-time
- Cost** - 10% decrease — Rework down; overtime down

IV. Analysis



Next Steps

What	Who	When
Confirm agreement of the analysis	Porter	Next week
Begin generation and evaluation of countermeasures	Porter	Next two weeks

Questions for Porter's 3rd A3

1. What has Porter learned?
2. What did Porter do to learn about the problem situation?
3. What does he need to do next?

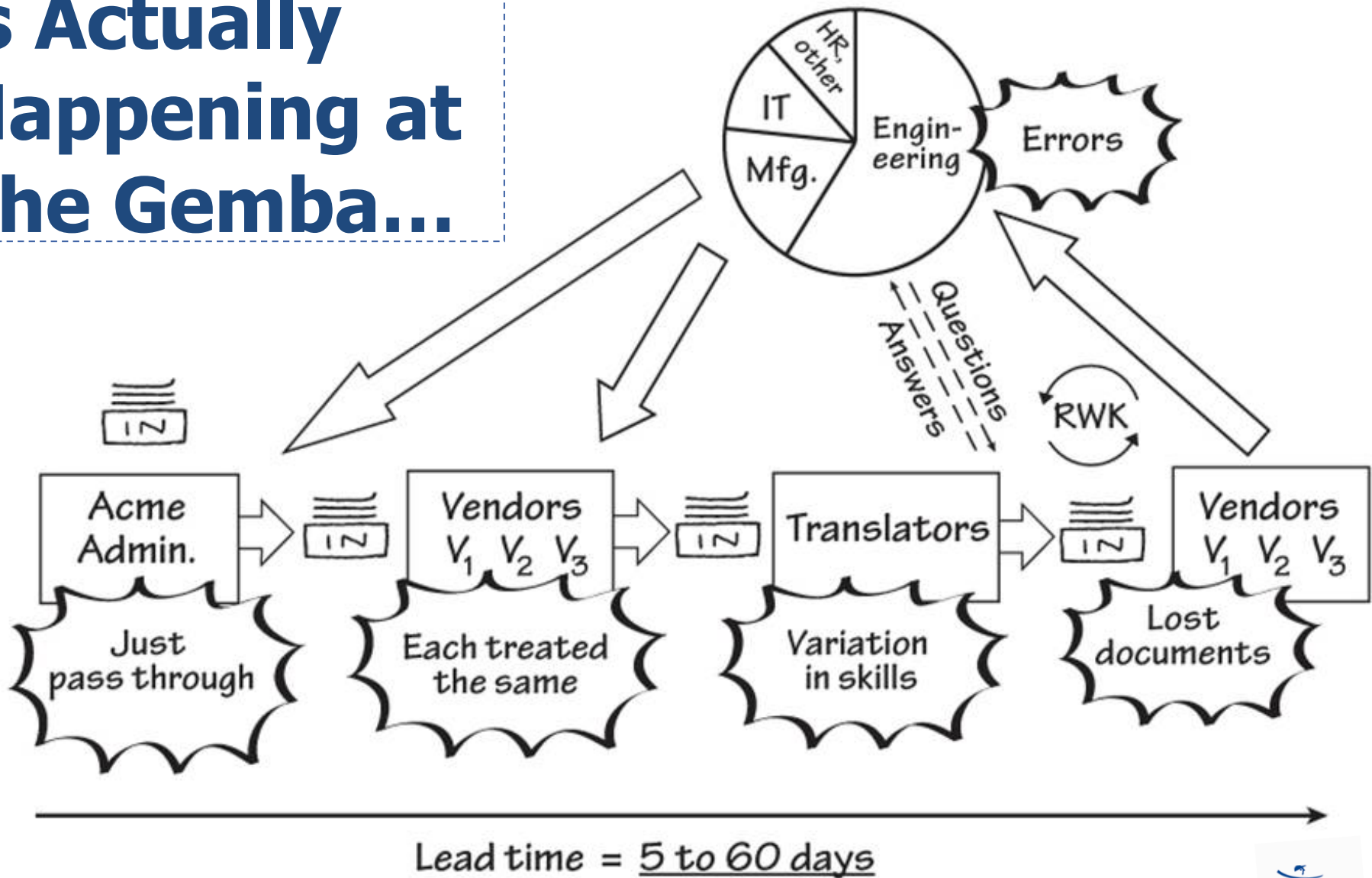
Porter's Problem: "Lost in Translation"

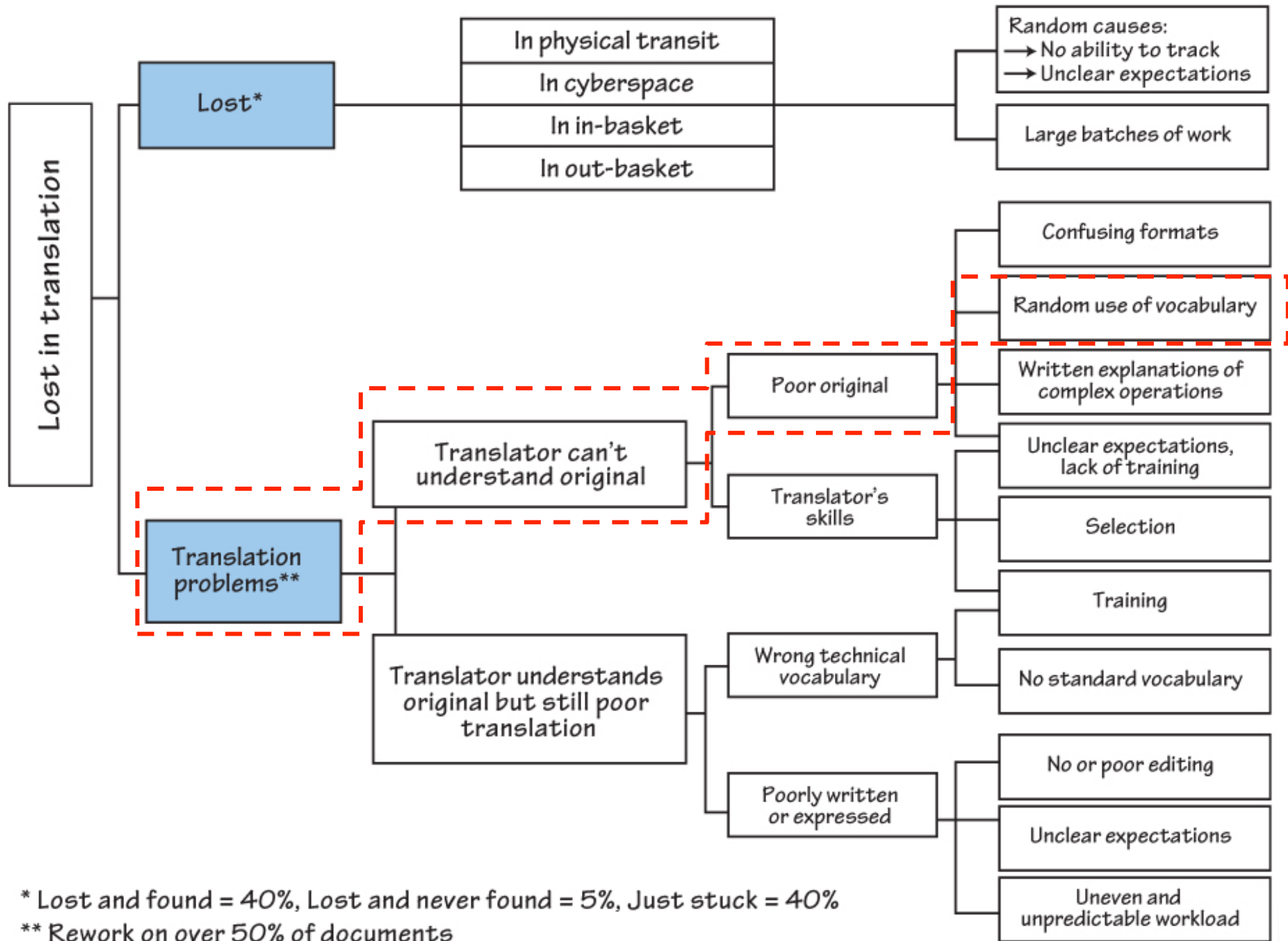


Restroom - Bathroom - Toilet - WC
or...Powder Room (Make-up Room)

Capture What is Actually Happening at The Gemba...

Current-state map

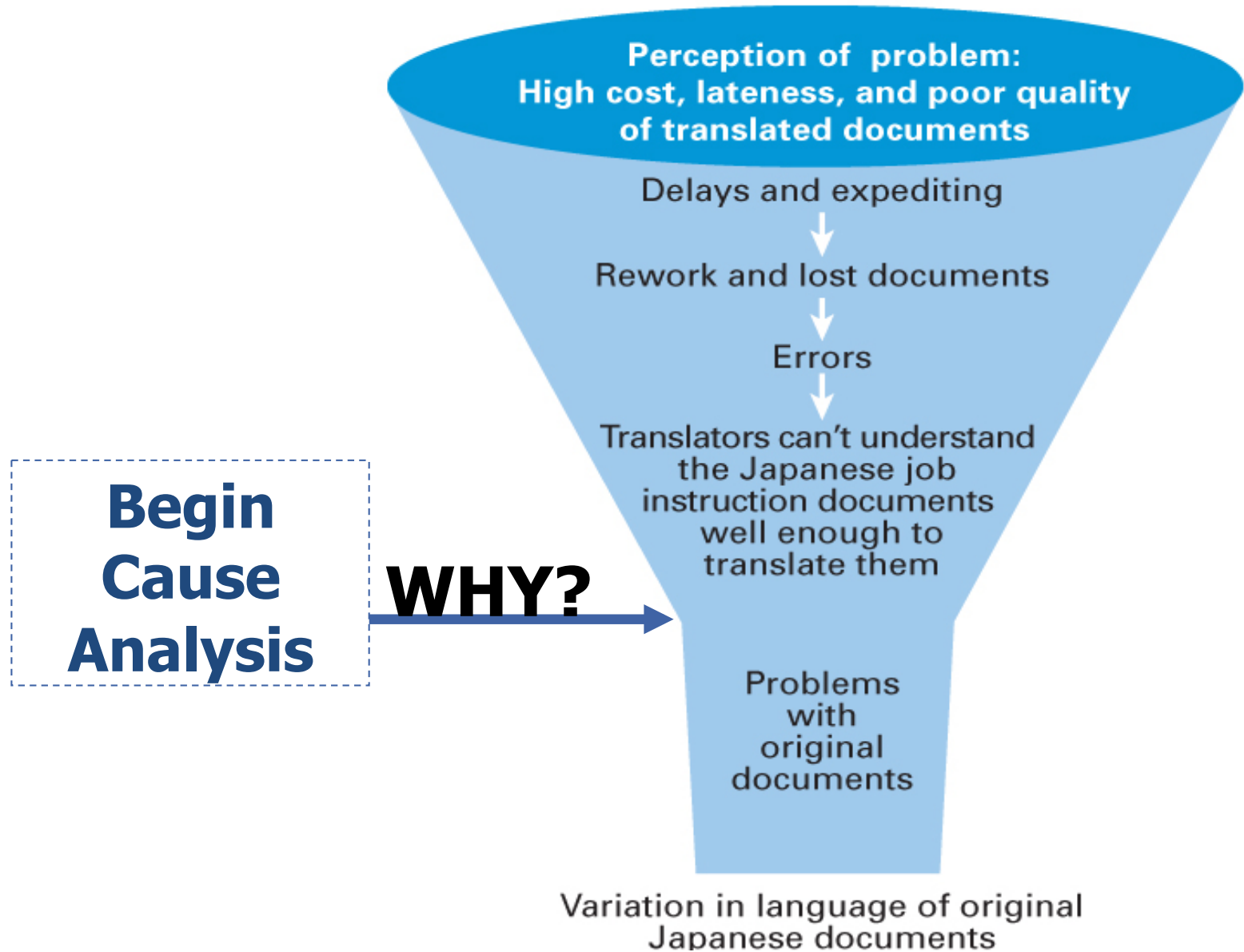




* Lost and found = 40%, Lost and never found = 5%, Just stuck = 40%

** Rework on over 50% of documents

Following the “Documents Delayed Because of Rework” Thread...



It Takes Two (or More) to A3...

- Author/Communicator
 - The owner of the problem who takes initiative to understand the situation dispassionately and lay out a proposal
- Responder/Coach
 - Anyone who receives questions, requests, is affected or otherwise needs to know, or who must authorize the action

A3 Practice

Roles

- **Author/Owner/Communicator**
- **Responder/Coach/Authorizer**

Skills

- **Reading**
- **Listening**
- **Writing**
- **Presenting**
- **Coaching**

Problem Solving Thinking



A3 Creation

What is the <i>purpose</i> ?	WHY?	Background
What is <i>problem</i> or <i>need</i> ?	WHY?	Current Conditions, Goal
What is the <i>cause</i> or <i>constraint</i> ?	WHY?	Analysis
What is the <i>plan</i> ?	WHY?	Countermeasures, Plan
What is the <i>proof</i> ?	WHY?	Plan, Follow Up

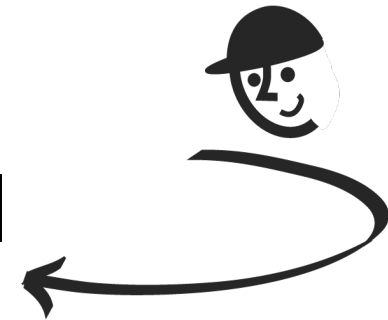


How do you know?

A3 Practice

Read and review the problem situation portions of your A3:

**Title, Background,
Current Condition, Goal**



A3 Review Roles

Each member at each table to rotate:

- A3 Author-Presenter
- Designated Reviewer-Responders
- Observer-Commentator
 - to observe and comment on both the A3 presentation and the coaching
 - keep group on time!

A3 Practice – As Presenter

- 10 minute presentation, 10 minutes Q&A, 5 minutes feedback from observer
- Walk through what's on your A3
 - Don't skip over anything
 - Add additional detail or “color” as needed
- You need to get your story out...
 - What do you need to emphasize?

A3 Practice – As Reviewer

Protocol – “A3 etiquette”

- Seek first to understand
- Let the presenter present, only stop him/her in the middle if there is something you completely don't get
- Ask purely factual questions (pure inquiry) first
- Then more probing questions
 - Is he/she focused on the Real Problem?
 - Is why address the problem NOW clear?

Reviewing the Problem Situation

1. Do you the reviewer/coach understand the problem?

- **If not...**

→ Use *pure inquiry* (more later) until you do...

2. Does the presenter understand the problem?

- **If yes, then go on...**
- **If no, then THAT becomes your problem**

→ To help the A3 owner with their problem solve

A3 Practice: As Observer

Look for Four Kinds of Questions (from Edgar Schein)

- Pure Inquiry
 - “What is happening?”
 - Diagnostic Inquiry
 - “Why is it happening?”
 - Prompting Inquiry
 - “What would happen if...?”
- Coaching Process Inquiry
- “What is happening here, now, between us?”



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88

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89

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91

Helpful Coaching

Is NOT Asking

- ▲ Is that really the problem you need to solve?
- ▲ Why do you think that's a problem?
- ▲ Why don't you look at _____?
- ▲ How is that your root cause?
- ▲ Have you thought about trying _____?
- ▲ Are you sure that's going to work?

IS Asking

- ⊙ Exactly what's the problem are you trying to solve?
- ⊙ Can you describe what's happening vs. what should be?
- ⊙ What have you looked at or heard?
- ⊙ What makes you sure you've got a cause/effect link?
- ⊙ What have you thought of trying?
- ⊙ What impact do you expect that CM to have?



94

The A3 Process

Is the purpose to describe your ideas and solution in order...

-- to convince?

-- or to engage?

→ *Convince* means to “*sell*” or “*get buy in*”

→ *Engage* means to “*become part of*”

-- to invite to take part in the thinking

-- and the experiment based on it

Helpful Coaching

Less Helpful

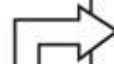
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Where do things stand today?
- Show visually using charts, graphs, drawings, maps, etc.
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↓				
VII. Followup				
What issues can be anticipated?				
- Ensure ongoing PDCA.				
- Capture and share learning.				

Title/Theme: *What Changes or Improvement Are You Talking about?*

Background: *What are you talking about & why?*

Purpose: What is the business reason for choosing this issue?
Overall Situation: What is the strategic, operational, historical or organizational context of the situation?

Current Situation: *Where do things stand now?*

What is the Problem or Need- the Gap in Performance?
What is happening now versus What Needs to be happening or What you want to be happening?
What are the specific conditions that indicate you have a problem or need, where and how much?
Show the facts visually with charts, graphs, maps

Goal: *What specific outcome is required?*

What specific improvement in performance is needed to close the gap?
Show visually how much, by when, with what impact.

Analysis: *Why does the problem or need exist?*

What do the specifics of the issues in related work processes (location, patterns, trends, factors) indicate about why the performance gap or need exists?
What conditions or occurrences are preventing you from achieving the goals?
Use the simplest problem analysis tool that will suffice to show cause-effect down to root cause. From 5 Whys, to 7 QC tools (fish-bones, analysis trees, Pareto charts) to sophisticated SPC or other tools as needed.

Recommendations: *What do you propose & why?*

What are the options for addressing the gaps & improving performance in situation?
How do they compare in effectiveness, feasibility & potential impact?
What are their relative costs and benefits?
Which do you recommend and why?
Show how your proposed actions will address the causes of the gaps or constraints in the situation.

Plan: *Specifically how will you implement? 4Ws, 1H*

What will be main actions & outcomes in the implementation process & in what sequence?
What support & resources will be required?
Who will be responsible for what, when & how much?
When will progress & impact be reviewed & by whom?
Use a Gantt chart to display actions, steps, outcomes, timelines & roles.

Follow-up: *How will you assure ongoing PDCA?*

When and how you will know if plans have been followed & the actions have had the impact needed?
What related issues or unintended consequences do you anticipate & what are your contingencies?
What processes will you use to enable, assure & sustain success?

A Good Problem Statement

Is NOT

- ▲ The simple reverse of your proposed solution.
"No one oils the machine".
- ▲ A lack of something, such as lack of a specific countermeasure.
"There is no standard work in place."

IS

- ◎ A problem in performance.
"The bearing wears out too frequently."
- ◎ Stated as concretely in measurable performance terms as possible.
"50% of the time bearings do not last through the standard of 300 hours."

Goals, Objectives

"If you don't know where you are going, you might wind up someplace else."

--Yogi Berra

NO

- ▲ The simple restating of your proposed solution.

"Workers will oil the machine every day".

- ▲ A simple statement of a tool or countermeasure.

"Implement standard work."

YES

- ◎ Addresses a problem in performance.

"Will prevent the bearing from wearing out too frequently."

- ◎ Stated as concretely in measurable performance terms as possible.

"Bearing will perform as required through the standard of 300 hours 100% of cases."

Current 50% → Goal 100%

As Reviewer, What to SEE in the Problem Situation Section

- 1. Can I see the real problem through the *noise* in the Situation as you described it?**
- 2. Can I see the GAP you are trying to close?**
- 3. Do I Understand why you need/want to close the Gap?**
- 4. Can I See the specific Problem(s) you are going to have to address to close the Gap?**
- 5. Do I Understand how much of the Gap you are going to try to close...this time?**

Questioning Mind

- What do you actually know?
→ How do you know it?
- What do you need to know?
→ How can you learn it?

NEXT STEPS: Problem Situation

What I KNOW – the Problem:	How To Confirm
What I Need to Know:	How to Learn It

Listening in Reverse

- Why is it important?
- ↑ How do you know? What's the gap?
- ↑ Why? What will that accomplish?
- ↑ Why? What will it change?
- ↑ Do what?

PDCA-style Questions

Plan (hypothesis): *What and why?*

No: "What can be done?"

Yes: "What needs to be done?"

Plan - Do: *When?*

No: "How fast can we do it?"

Yes: "When does it need to be done?"

Check, Reflect: *who, why?*

No: "What did you do?"

Yes: "What happened? Why did you choose to do what you did?"

Check – Act (Adjust): *what, why?*

Not just: "Did you get the results?" "What shall I assign you next?"

But: "What did you learn?" "What does the customer-company-employee need next?"

Document Translation Three-Month Review

Reviewer

date 9/20/08 Owner DP

Key Enabling Actions (from Proposal A3)

	Eval	Status	Countermeasure	Who/When
Vendor processes	⊙	Three-step process established, working	Ongoing PDCA	Porter Ongoing
Central document-flow tracking process	○	Established, working - Some problems getting through	Tweaking, ongoing PDCA	Porter Ongoing
Standard vocabulary database and templates	△	Development delayed - Difficult getting agreement on terms among Acme specialists - Technical difficulties - IT system compatibility issues - Program glitch delayed development	Investigation, observe, listen Ask why — nemawashi	Porter, each department
		Photos and videos widely applied	Countermeasures implemented, back on track	Rick, Terry
		Usage inconsistent - Some Acme departments using consistently, some not - Some translators using consistently, some not	Continue to check	Porter, each department
			Investigation, Five Whys, training	Porter, each department, Ana, each vendor

⊙ Exceeds expectations

○ Meets expectations

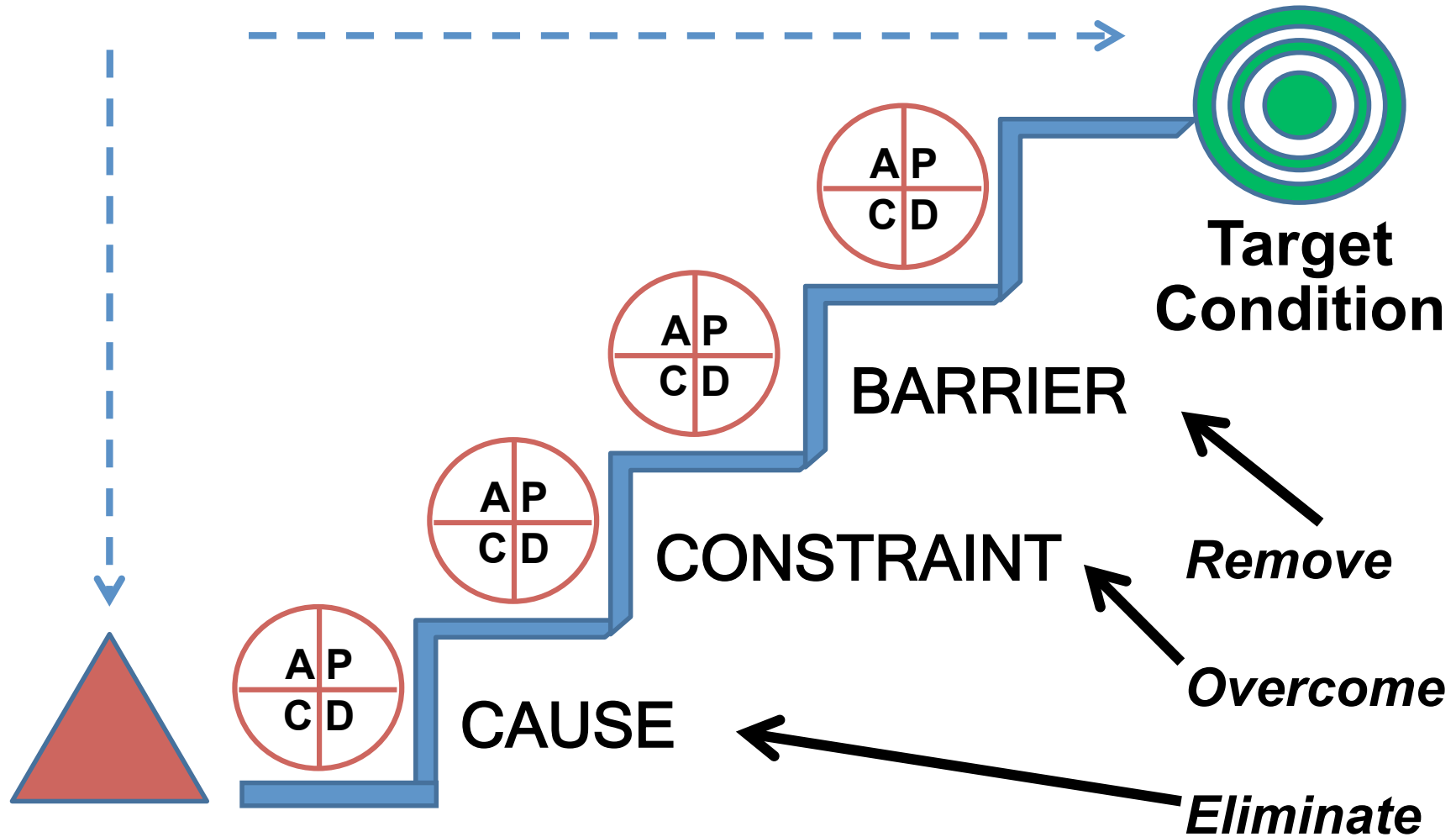
△ Requires some kaizen

Goals	Plan	Actual	Analysis	Countermeasure	Who/When
<u>Volume</u>	2,200 pages	2,200 pages	Planned number of documents completed But <u>overtime</u> and <u>rework</u> required Some documents still delivered late	Maintain current overall volume level: Ensure delivery of right document at right time → Review and improve central traffic control function → Meeting set for next week (detailed project review)	Porter 9/27/08
<u>Cost</u> overtime as % of total hrs. worked	0%	10%	10% O/T caused by <u>rework</u> problem	Reduce O/T by reducing rework — see "Quality" below	Same as below ↓
<u>Delivery</u> % of right document at right time	100%	90%	Many documents returned or delayed due to <u>rework</u>	Improve delivery by reducing rework — see "Quality" below	Same as below ↓
<u>Quality</u> % rework	0%	10%	Some documents returned Many delayed due to back-and-forth Q&A between translator and creator → Mostly for "job description" documents	Temporary placement of resident specialist translators at gemba	Porter: Acme approval Frances: Vendor negotiation Ana: Translator coordination

You are Here

GAP

Need to be Here



Final Discussion



The A3 Tool as a Process for...

- Problem Solving
- Proposing Improvements
- Standardizing
- Planning
- Reporting
- Reflection
- Project Management
- Change Management
- Alignment and Agreement
- Organizational Development
- Mentoring, coaching
- Developing people

***All
based
on
PDCA***

What Makes an A3 a Good One?



What Makes an A3 a Good One?

- It contains objective facts, data...
- It tells a story...
- It “resolves” a problem...



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But being technically “right” is only half the battle...

- It engages and aligns the organization

What Makes an A3 a Good One?

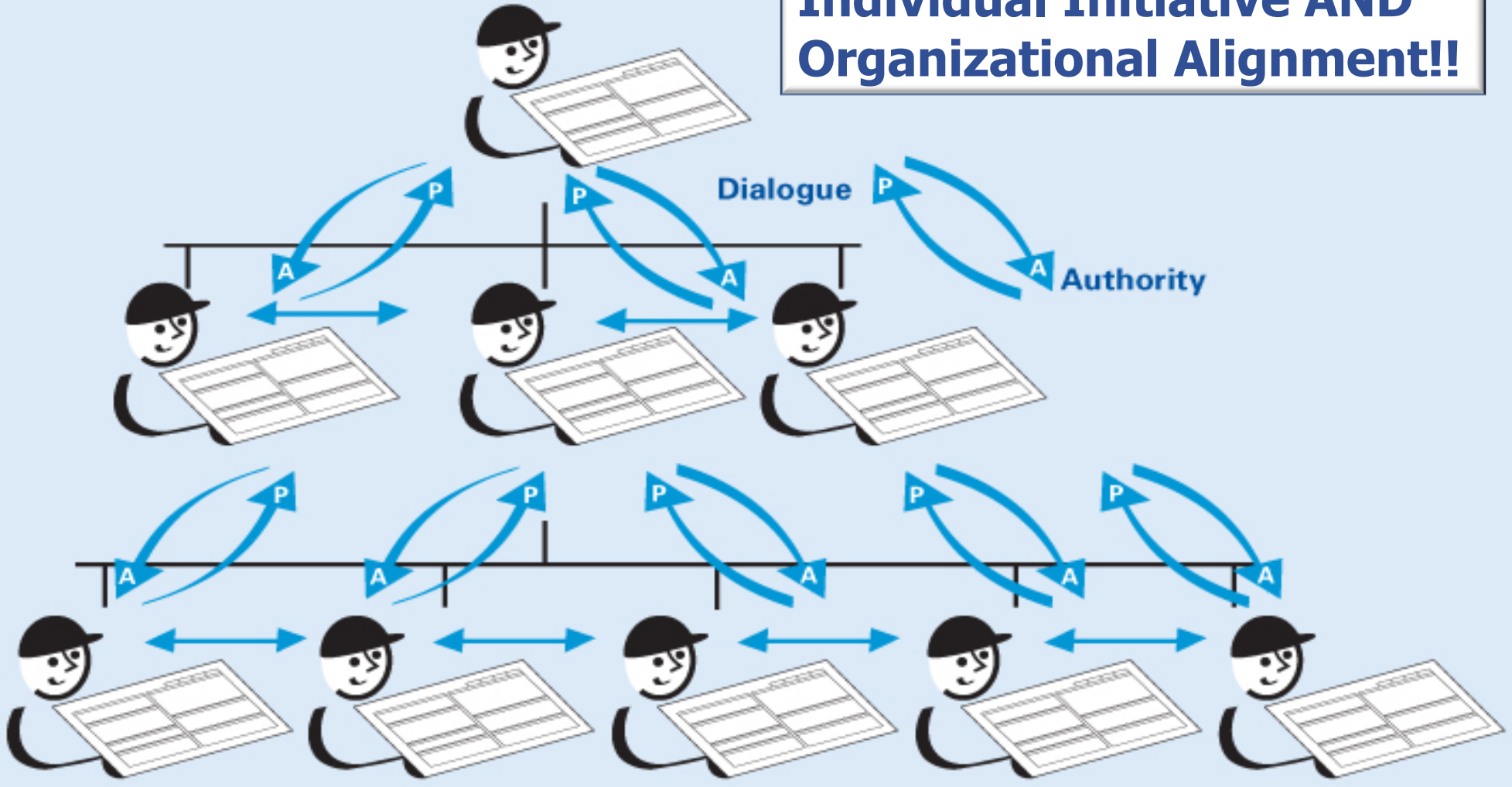
- It tells a story
- It contains objective facts, data
- It “resolves” a problem

But being technically “right” is only half the battle...

- Engages and aligns the organization

What really makes an A3 a “good one” isn’t the specific collection of facts and data that tell a perfect problem-solve. A good A3 is a reflection of the dialogue that created it.

Individual Initiative AND Organizational Alignment!!



Initiative - Dialogue - Alignment - Authorization

The Lean Leadership Challenge:

- Get the work done and
- Develop Your People
- at the **SAME TIME!**

