



How to Understand Value and Waste

Value Chain Competitiveness (VCC)

Version: 2

February 2020

This information is provided by Rolls-Royce in good faith based upon the latest information available to it; no warranty or representation is given; no contractual or other binding commitment is implied.



Purpose



How to Understand value and waste

- Understand the difference between Value-add and waste
- A clear understanding that all work we do, has waste
- The definitions and types of waste across the business
- What is Continuous Improvement (CI)
- How to identify and remove waste
- As a leader I understand that waste is all around us, and in a supportive culture we need to help teams to remove waste



How to Understand Value and Waste



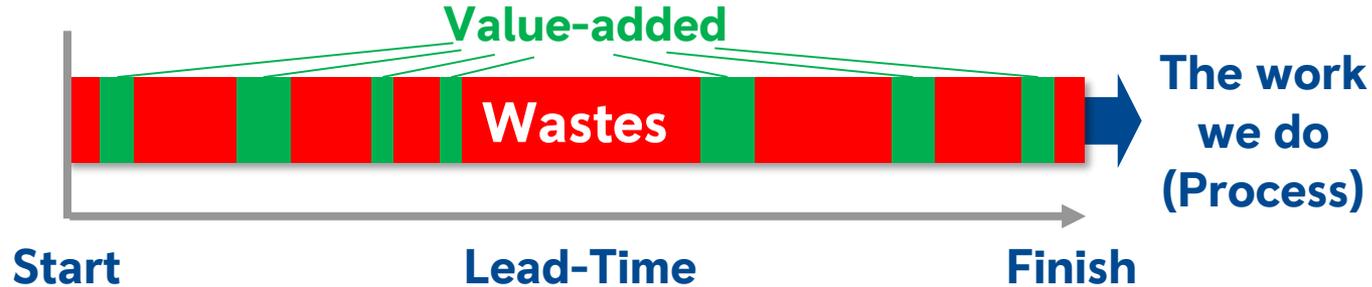
What is value-add (VA)?

Any activity that changes the fit, form or function of a product or service in a way that the customer is willing to pay for

What is continuous improvement?

- The relentless elimination of waste to enhance customer value
- “ A healthy dissatisfaction with the status quo ”

Value-Add & Waste



- The work that we do consists of time taking activity steps
- Activity steps can be categorised as either **value-added** (change fit form or function) and **waste** (or non value-added)
- Understanding what is value-added and waste can enable a thinking way of improving work and delivering more value

How to Understand Value and Waste



Value-Add & Waste



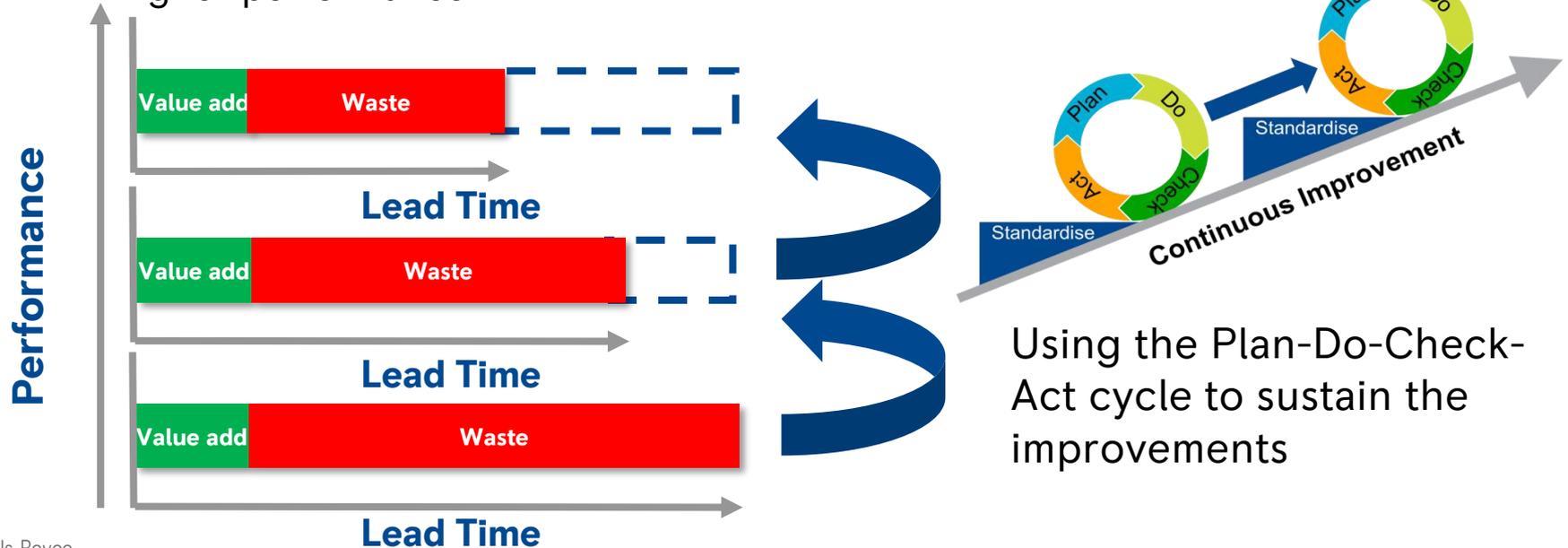
- The total amount of value-added activity can be much smaller than the complete lead-time of work, with lots of waste present
- The traditionally focus is to improve VA activity, which tends to be difficult and a technical effort to achieve
- In Lean the focus is on waste activity, to reduce or eliminate it, which tends to be easier and can be done by anyone, every day

How to Understand Value and Waste



Value-Add & Waste – Continuous Improvement

- In a Lean culture there is a constant challenge on waste by all.
- Small improvements by everybody contribute to a significant reduction in waste which yields a better way of working and higher performance.



Using the Plan-Do-Check-Act cycle to sustain the improvements

8 Wastes

- 1 T**ransportation
- 2 I**nventory
- 3 M**otion
- 4 P**eople
- 5 W**aiting
- 6 O**ver-Processing
- 7 O**ver-Production
- 8 D**efects

How to Understand Value and Waste



1 - Transportation

Transportation of work-in-progress, finished goods, information / services



Examples:

Possible causes
<ul style="list-style-type: none"> • Poor value stream design • Poor facility / office layouts • Poor organisation / housekeeping • Travelling when not required • Too many signatures required • Unnecessary steps in the process • Misplaced items

Symptoms
<ul style="list-style-type: none"> • Long distances between processes • Lengthy, or complex material handling systems • Multiple storage locations and hand-offs • Hand carrying documents for sign-off • Excess circulation of e-mails and files • Fetching consumables (facility, office) • Excessive travel / journeys



How to Understand Value and Waste



2 - Inventory

Inventory includes stock of raw material, work-in-progress, finished goods and information



Examples:

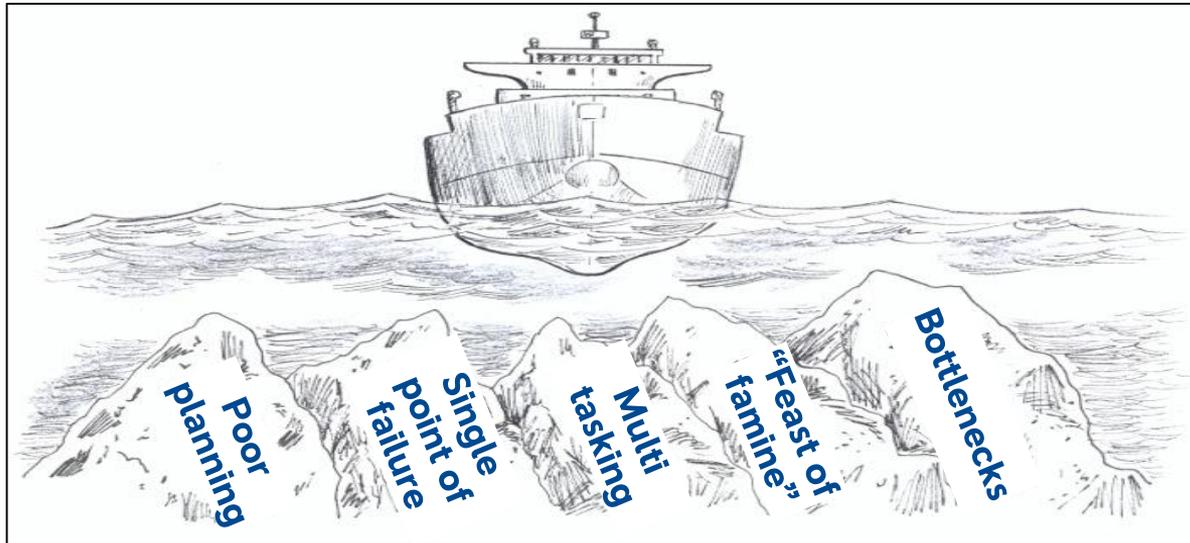
Possible causes	Symptoms
<ul style="list-style-type: none"> • Planning and control related issues • Non-Right-First Time / quality issues • Long changeover times • Batching of tasks / task switching • Project delays • “Just in case” mind-set • Inbox and file system not managed 	<ul style="list-style-type: none"> • Excess inventory queuing - products, files etc. • Excess work-in-progress to be completed • Build up of parts, emails, actions • Holding onto old media - catalogues, brochures, documents, emails

How to Understand Value and Waste



Sea of Inventory

- Inventory (the 'sea') is generally insurance to protect us from our problems
- As the Inventory levels are reduced, the underlying issues (the 'rocks') become apparent
- Problem Solving allows for less inventory (lower sea level) to be maintained



How to Understand Value and Waste



3 - Motion

Motion includes movement (people, equipment or electronic data) to pick, place, or remove items



Examples:

Possible causes
<ul style="list-style-type: none"> • Process and workplace design issues • Poor work method design • Workplace organisation disciplines • Undefined data or file storage • Lack of training / non-adherence to process

Symptoms
<ul style="list-style-type: none"> • Many work movements • Excess walking, stretching, bending or reaching • Unorganised workplace, searching for items • Additional time to complete tasks • Extra movements, clicks or key strokes

How to Understand Value and Waste

4 - People

People waste involves not tapping into, and following-up on the ideas and thoughts of the employees



Examples:

Possible causes

- Not asking for ideas
- Not listening to ideas
- Skills or training not matching role
- Poor communication between managers & teams
- Not sharing good practice
- Not recognising & rewarding good ideas

Symptoms

- Low morale or enthusiasm
- Not offering ideas
- Lack of commitment to activities (improvement or problem solving)
- Frustration, low moods
- Poor teamwork



How to Understand Value and Waste



5 - Waiting

Waiting for equipment to complete work; for material deliveries; for support to resolve issues; for people



Examples:

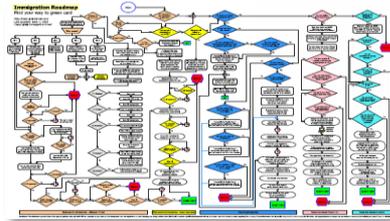
Possible causes	Symptoms
<ul style="list-style-type: none"> • Not single piece flow • Unreliable processes / quality issues • Unbalanced work - resources not matched with demands • Waiting for authorisation - lack of delegation 	<ul style="list-style-type: none"> • Lack of information, equipment, parts, support • Broken equipment, systems • Waiting response to requests - details, decisions • Non-attendance at meetings / reviews • Poor time disciplines in meetings

How to Understand Value and Waste




6 - Over Processing

Over-processing - anything more than the customer requires to complete the job



Examples:

Possible causes

- Standards - none / not used / out-dated
- Unclear specification / quality acceptance standards
- Unclear on customer requirements
- No standardisation of best techniques

Symptoms

- Doing more than the standard – polishing, painting, packaging etc.
- Consuming more resources than needed
- Generating more information than required - excess analysis / detail
- Many reviews and approvals

How to Understand Value and Waste



7 - Over-Production

Over-production - producing anything more than the customer requires is waste



Examples:

Possible causes

- Working to forecast / inaccurate information not actual demand
- Inappropriate performance measures
- Unreliable / unstable processes or schedules
- Attending meetings with no purpose or agendas

Symptoms

- Excess inventory (parts, documents, emails)
- Processing work earlier or doing unrequired work (parts, reports) “just in case”
- Work schedules / customer requirement not readily available – lots of re-prioritisation
- Working a bottleneck resource with the wrong product or inappropriate batch size



How to Understand Value and Waste



8 - Defects

Defects - defective work, product or service



Examples:

Possible causes

- Unclear specification or standards
- Inadequate training / skills shortage
- Incapable processes / equipment
- Poor asset care / workplace 5S
- Non-adherence to Standardised Work
- Overburdened with work

Symptoms

- Scrap, rework, concessions
- Customer queries or complaints
- Equipment failure / capability issues
- Data entry errors / paperwork corrections
- Repeating work / doing extra work & checks
- Different work methods observed



How to Understand Value and Waste



Leadership Examples

1 Over processing, over complicating	More than required, over management, micro managing, perfectionism. Filling meeting time. Complex and fat documents, long reports.
2 Searching	Disorganised, cannot find what's needed when needed, no system for filing & storing info/data, performance is unclear
3 Correction & rework	Repeated mistakes, standards not followed, no Management Standards, no consequences of actions, ineffective performance management
4 Repeat problems and fire fighting	Not leading, expecting or driving for root cause. Being the expert, hero, the fixer. Acceptance of poor root cause solutions, no systematic problem solving.
5 Complacency	Not challenging the status quo, not leading improvements and change. No experimentation, acceptance of poor performance and process waste.
6 Procrastination	Not doing what you said you would do, planning with no action. No commitment consequences, no PDCA thinking or PDCA follow up.
7 Miscommunication / no clarity	Not clear with expectations and direction, not setting clear goals, not listening or check understanding, only using email. No transparency.
8 Assuming, blaming (perception)	Not using systems thinking, no follow up. No Go, Look, See, checking or grasping reality. Decisions made without fact or understanding.
9 Duplication	Meetings, information flows, documents, decision making, communication, activities, responsibilities. Organisation structure, 2 bosses.
10 Switch Tasking	(Multi Tasking) Moving between tasks or activities including engaging with people whilst doing other activity & emails.
11 Waiting	Waiting for meetings to start, waiting for information, decisions, waiting to see / check what others do first.



How to Understand Value and Waste



Leading Waste Elimination

A leader should reinforce an understanding that waste is all around us, and in a supportive culture we need to help teams to remove waste

- What is the current impact on the business of waste?
- If we know waste, we can see it
- If we can see the waste, we can *question and challenge*, minimise or eliminate it
- Continuous Improvement is the relentless elimination of waste to enhance customer value
- “A healthy dissatisfaction with the status quo”

Leading a waste reduction activity, eg. waste walk

- Look at an area through “different eyes”
- See, recognise and capture waste examples
- Find causes and develop corrective actions
- Support the team in improvements

Go-look-see report – VA & Waste			AREA:	
1. WHAT IS THE PURPOSE OF VALUE AND WASTE?				
2. WHAT IS THE IDEAL CONDITION?			3. WHAT DO YOU SEE? 1. HOW?	
4. WASTE CATEGORY?			5. WHAT DO YOU SEE? 2.	
4. WASTE CATEGORY?			4. CAUSES?	
1. Transport – (work movement/transfer)			5. Strengths:	
2. Inventory			5. Opportunities:	
3. Motion			LEADERSHIP INPUT S?	
4. People (their creativity)			5. Weakness:	
5. Waiting			5. Threats:	
6. Over-production			LEADERSHIP INPUT S?	
7. Over-processing			7. WHAT COULD YOU DO TO IMPROVE?	
8. Defects				
9. Other				
4. KEY PRINCIPLES TO CONFIRM			RELATED OBSERVATIONS	
-Is customer demand clear?				
-Do KPIs include waste reduction?				
-Is waste being removed?				
-How is waste removal measured?				



Gate checklist: Understand Value and Waste



- The need for understanding Value and Waste has been gained
- Approach to improved Value-Add & reducing Waste is understood
- The 8 Wastes (TIM P WOOD) is understood
- Leadership role in Continuous Improvement is understood