

QUARRY OPTIMIZATION
5 WAYS TO CUT WASTE



STREAMLINE YOUR PROCESS

There are many different kinds of waste. Some are harder to identify than others. But they all have one thing in common: they add cost and time and impact your profits. When you spot waste, always look closely at the bigger site picture. Waste is not a root problem – it's usually a symptom of wider issues in the system.

This checklist will help you identify five wastes commonly encountered in quarries. Recognize any of these? Take action now, and keep taking it!

1. DEFECTS

Definition

Anything that does not meet customer specifications or requirements. The issue could relate to form, fit or function, or timing/delivery.

Examples

Product does not meet customer specifications:

- ▶ Oversize/fines
- ▶ Hardness/durability
- ▶ Cubicity
- ▶ Late delivery

Causes

Variance in:

- ▶ Raw material
- ▶ Processing methods
- ▶ Equipment maintenance/setup
- ▶ Employee training/experience
- ▶ Customer communication



2. OVERPRODUCTION/INVENTORY

Definition

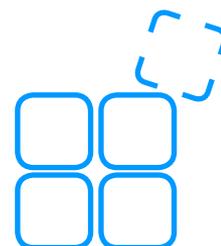
Any material or supply in excess.

Examples

- ▶ Making more than is required by the next process
- ▶ Making it earlier or faster than needed
- ▶ Excessive spare parts
- ▶ Unused equipment

Causes

- ▶ Large volume shots
- ▶ Equipment breakdowns
- ▶ Weather prevents processing
- ▶ Quality or yield problems
- ▶ Poor forecasting



3. WAITING/DELAYS

Definition

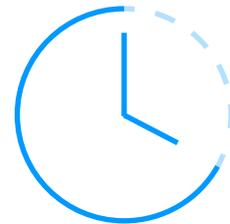
Anything that stops, slows or hinders production.

Examples:

- ▶ Waiting for equipment, parts, tools or supplies
- ▶ Waiting for upstream operations such as drilling and blasting
- ▶ Waiting for clarification of instructions
- ▶ Waiting for people to show up
- ▶ Trucks queuing or standing empty

Causes:

- ▶ Unbalanced workloads or schedules
- ▶ Lack of planning
- ▶ Unplanned maintenance and quality events
- ▶ Not having the right tools or equipment



4. NON-VALUE ADDED PROCESSING

Definition

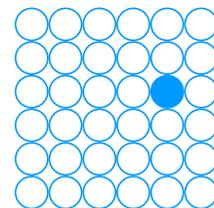
Actions that add no customer value to the product or service.

Examples

- ▶ Extra of anything – multiple screenings/excessive conveyance
- ▶ Overwatering roads
- ▶ Making tidy piles
- ▶ Unnecessary data collection

Causes

- ▶ Narrow focus on specific parts of the operation instead of looking at the entire system



5. TRANSPORTATION AND MOTION

Definition

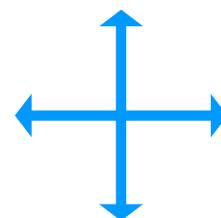
Inefficient or avoidable movement of material, equipment or people.

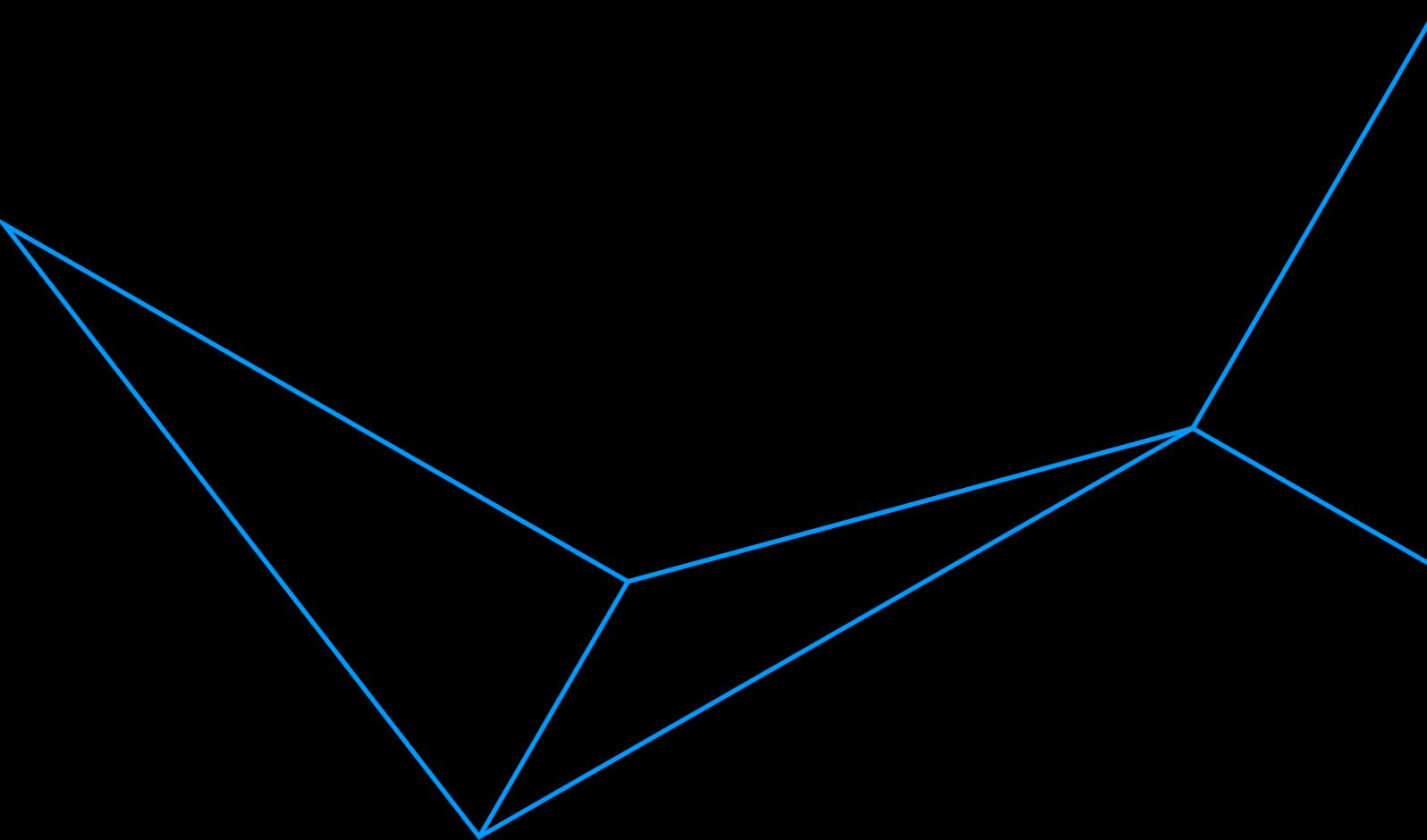
Examples

- ▶ Transporting rock, work-in-process and finished product around the site
- ▶ Walking/driving to job locations or to get supplies/raw materials
- ▶ Awkward loading patterns
- ▶ Using trucks rather than conveyors

Causes

- ▶ Availability of customer-specific material
- ▶ Poor site layout
- ▶ Lack of flow planning
- ▶ Crushing too far from blast site





For more information on how to improve your operations, contact your local Sandvik team or call our global head office on +46 (0) 8 456 11 00.

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