

ABB: Loss Mapping Transforms Production Efficiency



THE CHALLENGE

At its New Zealand site, ABB’s automation engineer, Barry Kleine, aimed to improve a logical, functional, efficient operation. Yet simply addressing automation issues as they occurred was time-consuming and costly, since quick fixes did not necessarily address the root causes of problems.

ABB believed that effective problem prevention was the only way to achieve sustainable improvement—Kleine’s task was to find the methodology to properly analyze and evaluate the process, accounting for every factor that affected production, from equipment to communication issues.

Kleine explained, “I began trying to document all the company’s invaluable knowledge and know-how in a clear and easily understood format. After

evaluating a number of alternatives, I discovered Mindjet provided the simplest and clearest way to break up a mass of information and present it visually. Using Mindjet, I developed the Loss Map, which allows us to work more systematically.”

THE SOLUTION

Kleine’s Loss Mapping process was essential in focusing site resources in New Zealand, defining Key Performance Indicators (KPIs) visually in a framework that represented both the architecture of their production system and relationships among all factors in that system.

Drilling down through each source of loss, managers gained a deeper understanding of how these factors impacted the KPIs. It allows the KPIs with the largest potential improvement to be identified and focused on at an early stage of a loss review. When the resulting data is compared to benchmark figures, personnel can focus on those factors that deliver the fastest returns.



ABB is an engineering leader in power and automation technologies that enables utility and industry customers to improve performance while lowering environmental impact. With a focus on technology leadership, global presence, application knowledge and local expertise, Swiss-based ABB Group operates in more than 100 countries and employs about 145,000 people.

CHALLENGE

Discover all factors that impact efficient production, including equipment, technology, and labor elements.

Identify root cause touch points to mitigate loss and maximize return.

SOLUTION

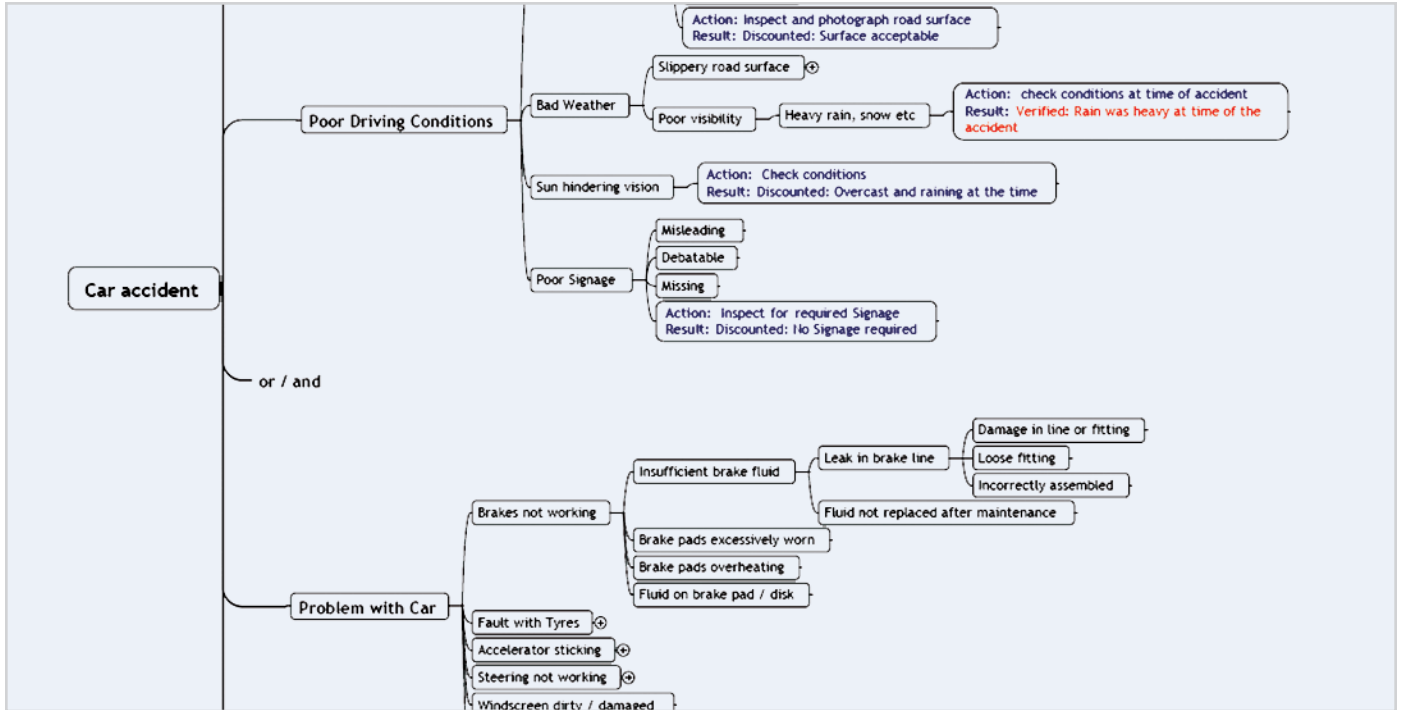
Create Loss Map for visual structure of automated production process, targeting Key Performance Indicators (KPIs) with greatest potential for improvement.

Analyze and prioritize significant factors for innovation and advancements to attain best returns in efficiency.

RESULT

Local onsite achievements included: Overall Equipment Effectiveness (OEE) up 22.4%; Maintenance costs/unit down 35%; Employee satisfaction up 12 points to 78%; Overall performance increased as environmental impact decreased.

Created with Mindjet, ABB’s Loss Map process has been rolled out to colleagues and clients globally, providing knowledge, understanding and pathways to greater production efficiency and plant strategy.



Project planning with Mindjet

The Loss Mapping process yields knowledge regarding all factors that limit achievement of business objectives, and integrates a system to prioritize loss mitigation tasks. Sites using the process rapidly recognize that the issues they are focusing on are not necessarily the most important sources of loss at the site—an insight that supports effective refocusing for best practices.

THE RESULTS

“Each day, I know exactly what I need to do, what I need to sign off on, and track priorities and processes,” said Kleine. “Each year that I’ve done this, I have achieved 98% of my performance criteria, and it’s taken less than fifteen minutes to show my manager. Once I show him a print of the Mindjet map, he can see this at a glance.”

Kleine adds, “ABB’s Loss Map has been rolled out in more than twenty countries, and—at every site—has resulted in a better understanding of plant issues by personnel, as well as a refocusing of the site improvement plan to achieve faster gains.” Kleine has presented his Loss Map maintenance program to colleagues in 100 countries, and shown the Loss Map to more than 500 ABB training representatives from across the globe. All agree that the Mindjet-based Loss Map makes life easier.

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Barry Kleine, Global Reliability Manager, ABB Process Automation Service, New Zealand

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