

Knowledge Management - K-Maps

K-Maps are a practical solution to knowledge management, developed specifically for manufacturing companies. They provide an easy to use, structured way of capturing and managing the knowledge contained within the organisation, for every process and product.

- In every business valuable knowledge is lost when employees leave. Time that could be spent adding value to your business is often wasted reinventing the wheel or seeking out information.
- Your employees may have valuable knowledge about your processes that is not being fully exploited, or there may be gaps in your knowledge base that you don't know about which could be costing you time and money.
- Knowledge can be scattered throughout the organisation, you may rely heavily on key employees, or different shifts may have different strengths and weaknesses.

Why capture and share knowledge?

Businesses that capture and share knowledge at all levels are able to find new ways to improve quality, standardise operations and replicate best practice across different parts of the company. Furthermore, training becomes easier and more effective as knowledge gaps are identified. With knowledge sharing, the company culture can change from being rigid and adverse to change, to being open, flexible and more motivated

K-Maps provide a starting point for the development of a web-enabled, database driven system to integrate knowledge management and key aspects of manufacturing. K-Maps can be developed to incorporate:

- Manufacturing practices
- Cost models
- R & D planning
- Resource management
- Training

Print Grid

	Restraint	Edge Preparation	Cleaning	Fit-up	Preheat	Interpass Temp.	Environment	Wire	Flux	Cable Connection	Welding Parameters	Sequencing	Number of Passes	Cleaning	Heat Treat	Dress
Flaws - Hot Cracks																
Flaws - Cold Cracks																
Flaws - Porosity																
Flaws - Lack of Fusion																
Flaws - Undercut																
Flaws - Inclusions																
Bead Reinforcement																
Leg Length																
Distortion																
Slog Detachability																
Performance - Strength																
Performance - Toughness																
Performance - Fatigue																
Performance - Corrosion																



"The K-Map is an excellent tool for pulling out information from the team; we've captured knowledge that would not have been available to us in ten year's time. The few days spent mapping the knowledge was definitely time well spent."

Dr Chris Spacie, Technical Director, Morgan Carbon Ltd

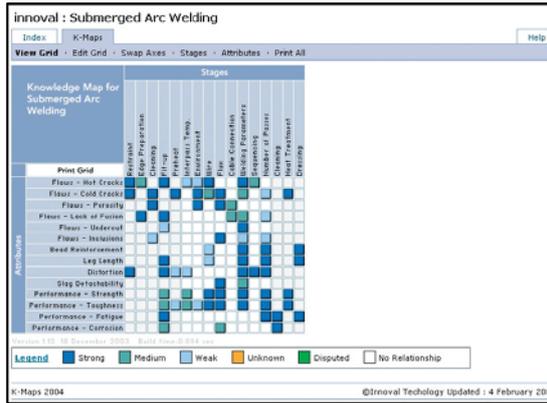
How are K-Maps produced?

We work with your teams to map all of the relevant knowledge about your manufacturing process using our K-Map software which consists of a matrix showing how each process stage in the manufacture of your product affects the product attributes.

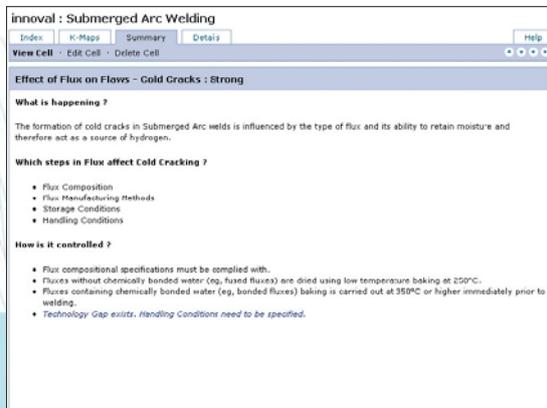
Behind each intersection in the matrix, tacit knowledge is captured about the nature of each interaction and the controls in place to ensure a good quality product. Explicit knowledge, in the form of data to support the tacit knowledge, can also be captured.

The Structure of a K-Map

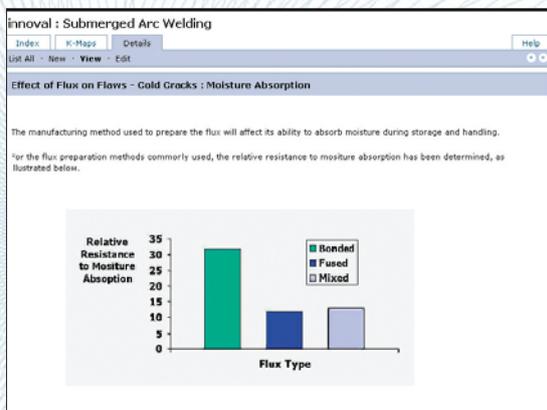
Level 1: Knowledge Map shows how the process stages affect the product attributes.



Level 2: Summary Level collects the tacit information about how and why a particular process stage affects the product attributes.



Level 3: Detail Level captures data to support information in the Summary Level.



How will your business benefit?

- Collaboration - everyone with input to the manufacturing process and the product is involved.
- Powerful knowledge - the complete body of knowledge about a manufacturing process is in an easy-to-access visual format.
- Shared know-how – no more guess work or “black art”. Everything you need to know about your customers’ requirements, and how the different process stages affect the product attributes is available at the touch of a button.
- Problem solving and the identification of critical processes is faster with K-Maps. They can also help the introduction of improvement techniques such as FMEA, Six Sigma and Lean Manufacturing.
- Comparison – K-Maps can be developed to allow you to compare operating practices across multiple plants to improve communication and identify best practice.
- Process optimisation – leading to cost savings, improved quality and better customer service.
- Research and development is made faster and more effective through increased team collaboration and readily available knowledge.

Who are Innoval?

Innoval Technology is a materials consultancy comprising engineers, materials scientists, and business managers. We specialise in light metals applications and provide technical expertise, contract research, analytical and testing services.

Collectively our team has over 400 years experience of aluminium technology, and is equipped with the skills, knowledge and latest technology to solve all your materials problems and development needs.

We have published in excess of 350 technical papers, and we are approved to ISO 9001:2000 and ISO 17025.

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