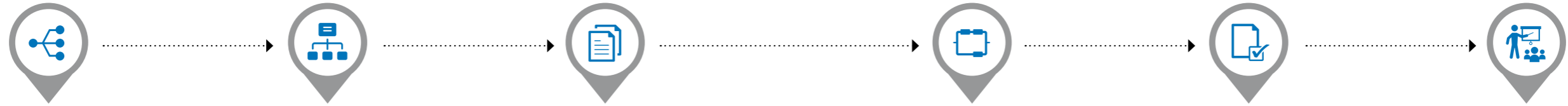


We know the way to optimal safety. Accompany us.



1. DIRECTIVES AND STANDARDS RESEARCH	2. DEFINITION OF THE SAFETY CHAIN	3. SAFETY-RELEVANT INDICATORS	4. TECHNICAL IMPLEMENTATION	5. VALIDATION	6. TRAINING COURSES
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Your key questions:	Your key questions:
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- Which potential hazards can occur in my machine and how can I assess them?
- Is a safety function involved? Does a failure of this function lead to the endangerment of persons?
- Do my protective devices depend on a control system?
- Should SMC provide an installation-ready solution (e.g. in the form of a control cabinet)?

- What Performance Level emerges from my risk assessment?
- Do constructive measures suffice to minimize the hazard?
- Which safety functions are appropriate for the respective hazard situation?
- Which components belong to the safety function?
- Which options do I have to achieve the required Performance Level?

- How often can the safety function expect to be actuated?
- Does the safety chain's service life correspond with that required by the standard?
- To what extent must I be able to detect a safety function's failure?

- How do I design a standardized circuit?
- Must a circuit be evaluated by external assessors?
- What do I need for complete CE-conformant documentation?
- In which form must the documentation exist?
- How long must the documentation be available?

- Was the required Performance Level actually achieved?
- Have I worked according to the latest state of technology?
- Were all safety principles properly implemented?
- Have I analyzed all of the misuses that could be expected?
- Which errors can I preclude?
- Does my quality assurance satisfy the requirements of the standard?

- What duty of information do I have towards to the machine's user?
- Does a need exist in my team for further education and training in the area of machine safety and pneumatics?

SMC offers solutions:	SMC offers solutions:
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✓ We support you during the **risk assessment** as well as with questions about various directives and about Performance Level.

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✓ We help you to find the **appropriate safety functions** corresponding to the hazard and to implement them under ISO 13849 and the current safety regulations.

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✓ We gladly provide **all of the necessary parameters** for SMC components. Furthermore, SMC offers expert support when calculating the safety function pursuant to ISO 13849-1.

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✓ We support you comprehensively in the **drafting of circuit schematics** and concepts – from the simple circuit to complete, installation-ready CE-conformant solutions.

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✓ We gladly support your during the **testing and analysis** of your safety system according to ISO 13849-2.

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✓ SMC offers targeted, customized **training courses and advanced education** on the subject of safe control with emphasis on pneumatics and electrical equipment.