



Applicable Management SYStems

Avoiding unnecessary costs

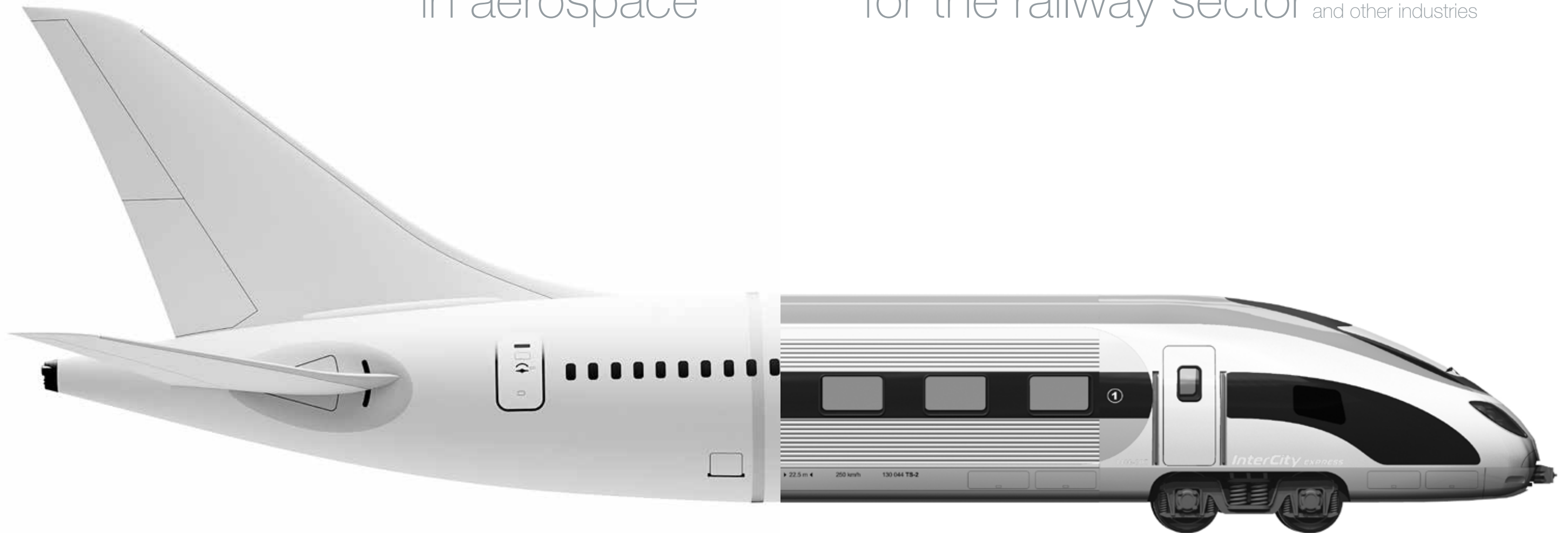
Optimising long-term availability

- Product Lifecycle Management (PLM)
- Obsolescence Management (OM)
according to IEC 62402
- Configuration Management (CM)
according to International Standards
- Individual Software and Tools



Experience and competence
in aerospace

applied to processes
for the railway sector and other industries



**Obsolescence Management (OM)
according to IEC 62402 for
the aerospace industry**

Strategic, proactive and
reactive Obsolescence
Management approach

Proprietary software and
tools according to IEC 62402

Designation system for
railway vehicles according
to EN 15380-2

**Obsolescence Management (OM)
according to IEC 62402 for
the railway sector and other industries**

Realised savings with comprehensive management and suitable tools

- Within just 7 months after process implementation, savings of more than \$1 million have been achieved (SBB CFF FFS, Switzerland)
- Process achieved a return on investment (ROI) of 23 to 1 (Independent Air Force evaluation of an OM Software Tool)
- \$100 million in cost savings realised since 2001 (Boeing, Mesa – AH-64 Apache)

How you benefit:

- Clear indication of obsolescence costs (interference cost model)
- Cost avoidance and reduction of average obsolescence costs
- Real savings realised within just 12 months after process implementation

Obsolescence Management (OM)

Driven by increasingly fast technological change, systems and components are developed and launched at an ever faster rate. The result is a dramatic change in production methods for each of the components and systems and their availability on the market. A growing segment of the manufacturing industry can no longer align the lifecycles of its own products with the lifecycles of the components required.

If a component, module, material, tool, software, process or standard required for the production or repair of the company's own products is no longer available, cost-intensive supply bottlenecks arise. This is called obsolescence. Active Obsolescence Management is becoming increasingly important to reduce and avoid extreme costs.

for the railway,
aerospace,
automotive &
industrial sector

AMSYS GmbH offers reactive, proactive and strategic solutions according to IEC 62402 for the increasing problems with obsolescence.

Dedicated tools developed specifically for this purpose and database-supported software assist the Obsolescence Manager in his daily work. Statistical models designed to itemise and allocate obsolescence costs support sustainable and economical problem solving.

What we do for you

We support you in the development, extension, improvement or daily operation of your Obsolescence Management within your organisation through our expertise in:

- Workshops / Seminars
- Weak-Point Analysis / Studies
- Concept Development / Implementation
- Process Implementation / Training
- Operational Management / Execution
- Software / Tools

OM Software ARMIN www.aminsoftware.com

The **ARMIN** software - Availability, Reliability, Maintainability Intelligence - facilitates product lifecycle management with a focus on Obsolescence Management according to IEC 62402. Manufacturer and supplier systems as well as operator vehicles and fleets can be analysed and monitored. The standard



"Designation system for railway vehicles" (EN 15380-2) is employed for the system allocation and designation. The communication and data exchange with key suppliers can be significantly simplified and established in a standardised form.

ARMIN provides an insight into your vehicles and systems. The software allows the analysis of individual components and systems where data is not currently contained in any regular obsolescence database and availability forecasts cannot be obtained automatically.

ARMIN is the first software to provide additional peripheral BOM monitoring. Unlike existing tools, ARMIN observes the system as a whole and the user can tailor the configuration for this purpose. This facilitates the implementation of holistic and sustainable solutions without adopting cost-intensive and recurring stand-alone solutions. Obsolescence incidents can be registered, effectively analysed and processed at system, vehicle

and fleet level. The software compares existing system strategies, facilitating economical and sustainable solution finding, as well as an adjustment of existing strategies.

ARMIN has a risk assesment incorporated according to IEC 62402, which is based on the standard EN 50126-1 "The specification and demonstration of Reliability, Availability, Maintainability and Safety (RAMS)". System availability is used to define the necessary service level agreements (SLA) with suppliers or customers.

ARMIN allows you to develop your own data, which is used for the classification of obsolescence incidents. For the first time, you are able to calculate obsolescence costs and analyse their source and their effect. The integrated "interference cost model" allows an economic efficiency analysis of the current obsolescence processes and a statement of potential cost savings.



OM Portal www.obsolescence-management.net

Rail vehicle operators, as well as national and regional transport companies can utilise the portal to exchange specific obsolescence information and join forces with all registered members to find information on the subject. Urgent Obsolescence Management issues are presented and discussed between the members. For each case, all necessary information can be attached, e.g. tables, drawings and technical specifications.

The comment function allows each member to participate actively in every topic and share valuable information. Members cooperate to find a solution or provide such a solution to other members free of charge.

The minimum membership for the Obsolescence Management Portal is 12 months. All registered members have unlimited access to all content and information contained on the portal for this period. They are able to contact other members and exchange information without incurring additional charges. Each member benefits from the knowledge and experience of the other registered members.

Like the **Obsolescence Management software ARMIN**, the portal uses the designation system for railway vehicles according to the standard EN 15380-2. This system allows codified allocation for problems, costs and solutions. You benefit from a unique code that is standardised all over Europe. Timely information and adapted solutions can translate into cost savings of thousands of Euros.

How you benefit

- Ease the burden of your Obsolescence Manager through quick and simple capture, processing and analysis of obsolescence incidents
- Clearly structured and software-based process flow (browser-based software)
- Utilise other members' experience
- Creation of your own obsolescence database
- Itemisation of obsolescence costs
- Reduced resource requirement for handling and solving obsolescence issues
- Early information about imminent obsolescence

Configuration Management (CM)

Configuration Management ensures the integrity of all information across the entire lifecycle of products. This results in product quality and avoidance of unnecessary costs across the entire product lifecycle.

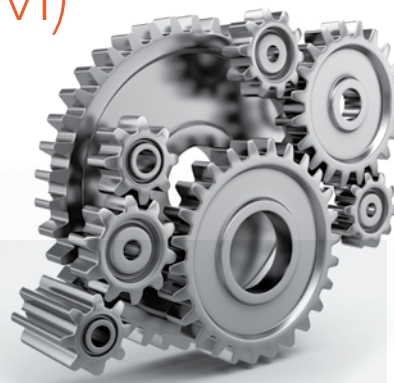
Incorrect information lead to mistakes that may incur significant additional costs. Safety critical errors - especially where human life is at risk - often require expensive measures for the removal of defects or deficiencies. This needs to be prevented right from the start.

General or product-specific standards exist for each product type and sector, which define its Configuration Management. **AMSYS GmbH** supports you in designing your Configuration Management in line with the established standards. These include ANSI/EIA-649B, ISO 10007, CMII, RCTA DO178B, ECSS-M-ST-40C, ACMP, STANAG. Configuration Management is a crucial pre-requisite for efficient Obsolescence Management.

Our Services

We help you to:

- Review your Configuration Management and detect vulnerabilities
- Define new and improved procedures
- Implement and realise concepts
- Build knowledge in your organisation
- Select and improve software tools
- Provide operational support for your processes



Resource, time and cost savings





References (Abstract)

SBB CFF FFS

Swiss Federal Railways

Reactive and strategic process definition, development, implementation, training, documentation and interim solutions. System health monitoring and database development. Founding member of the railway OM portal.

VAG

Transport Corporation Nuremberg

Process definition, documentation, preparation of specifications and development for new purchases and modification. Founding member of the railway OM portal.



Airbus Defence & Space

Integration and support obsolescence software tool.



Elektronik System and Logistics Group

Process definition, integration software tool RAC SMART for obsolescence monitoring, Environmental Impact Assessment (EIA).

RUAG

RUAG Defence AG

Process workshop and deficiency analysis, development of a comprehensive obsolescence concept and reporting.



Volkswagen AG

Design and implementation of a modular software system based on IBM Rational Synergy for central component development.

BVG

Berlin Public Transportation Services

Obsolescence Management workshops and seminars. Founding member of the railway OM portal.



Deutsche Bahn AG

Obsolescence Management workshops and seminars. Founding member of the railway OM portal.



Applicable Management SYStems

Avoiding unnecessary costs

Optimising long-term availability



AMSYS GmbH

Fuerstenrieder Strasse 279a
81377 Munich, Germany

Your points of contact

Hans-Georg Dueck

+49 (0)89 324 06 133

Bjoern Bartels

+49 (0)89 324 06 419

For further information see

www.am-sys.com