Context® System Design Management for Automotive Functional Safety

System Design Management Simplifies Compliance
Successful ISO 26262 projects require the connection of several software capabilities and its related linked data into one process. Without an integrated environment, the burden of these process compliance activities can overwhelm your project. Using a pre-defined, ISO 26262-based structure, Context SDM integrates your tools and process into a pre-defined ISO 26262 structured data organization architecture allowing you to focus on developing exceptional automotive systems.

Architect and plan your ISO 26262 project’s tools and processes. Context SDM allows you to integrate your toolset and process requirements into a seamless environment using open inter-tool communication technology.

Connect and trace your project data as you progress through your ISO 26262 development project. Context SDM captures dependencies through your full lifecycle of safety, requirements, design, verification, and validation data regardless of tool.

Analyze and report on your full set of ISO 26262 project data. Context SDM provides outstanding visibility, analysis, and reporting on your full project for project managers, systems engineers, regulators, and auditors.

ISO 26262, Road Vehicles:
Functional Safety is a set of guidelines addressing the safety lifecycle of automotive systems comprised of electrical, electronic and software components. As automotive system complexity increases, the processes and guidance outlined by ISO 26262 have become increasingly important in avoiding safety risks caused by system failures.

Functional Safety Tasks Supported by Context SDM:

Hazardous Event Analysis
- Complete hazardous events and record associated risk assessment data

ASIL Assessment
- Assign Automotive Safety Integrity Levels (ASIL) to hazardous events

Safety Goals & Requirements
- Capture safety goals & requirements based on the ASIL assessment
- Generate instant change impact analyses

Verification & Validation
- Trace validation and verification reviews, tests, and analyses
- Generate real-time metrics on project progress
Connect Your Existing Toolset
Linking any configuration or data management and lifecycle tools, Context SDM delivers the relevant data, dependencies, requirements and issues directly to the designers in the appropriate design tools. Optional workflow services can guide and control the product through project milestones and required approvals.

Context SDM elevates the efficiency and economy of the development process without demanding disruptive change.
- Data managed in original storage/CM system
- Integration in design tools delivers dependency information directly to users
- Flexible views and reports access status rapidly
- Built-in automation accelerates repetitive steps

Visualize Your Full Project
Project managers, reviewers, and any other product data clients have interactive access to that information through the views provided by the Context SDM product manager web interface. These views include queries, dashboards, and reports.

Industry Standard Collaboration Technology
Built around a server architecture, Context tracks the data created and maintained by the individual design tools, and their appropriate data versioning or configuration management functionality. Context maintains meta-data about the designs, versions and dependencies, and tracks associations across all tools and disciplines.

Using the Open Services for Lifecycle Collaboration (OSLC) standard, Context SDM leverages industry-leading development and implementation of a service-based, tool-to-tool collaboration platform, integrating it into the design flow.

OSLC enable tools to share essential information, at selectable levels of detail, without requiring full tool installations at every desktop. This includes queries, previews of data, and data editing.

Additional Context SDM Solutions
- √ Context for SAE ARP4754A/4761 (Airborne Systems)
- √ Context for RTCA DO-178b/c (Airborne SW)
- √ Context for RTCA DO-254 (Airborne Electronic HW)
- √ Context for IEC 60101 (Medical Equipment)