



European Union Smart Borders Initiative

Business Directors' Panel, Portorož, Monday, January 26

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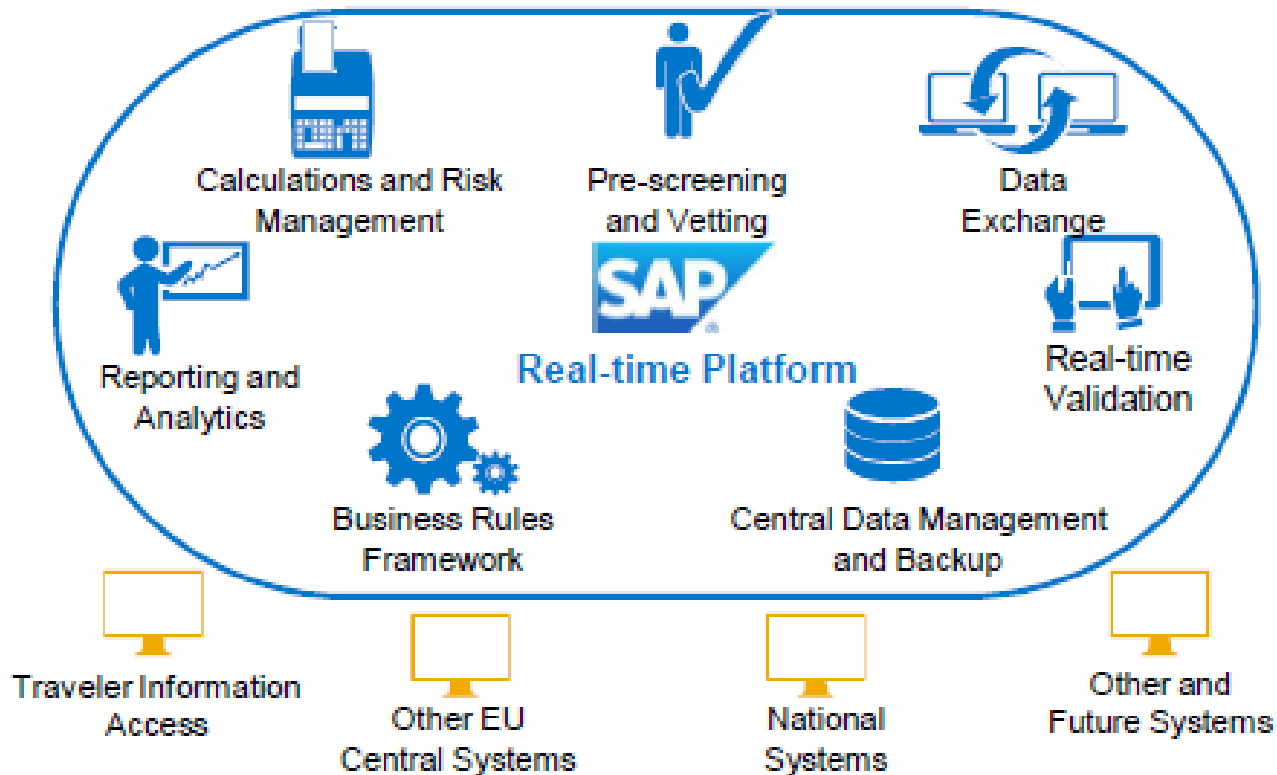
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THE BEST-RUN BUSINESSES RUN SAP™



Enabling the European Union's Aspirations



The Smart Borders solution should be evaluated against Technical Feasibility, Economic Viability and Member State Desirability.

The conceptual architecture is:



Flexible

Caters for the immediate EES and RTP requirements, while allowing for future needs.



Scalable

Supports the current and future anticipated traveler volumes and also "deployable" to existing and envisioned parties.



Adaptable

Allows for future configuration of requirements and integration among processes, systems and data.



Secure and Governed

All components, transactions and data processing is transparent and auditable.



Cost Effective

Based on configurable components with the option for rapid deployment.

The SAP proposition for the European Union

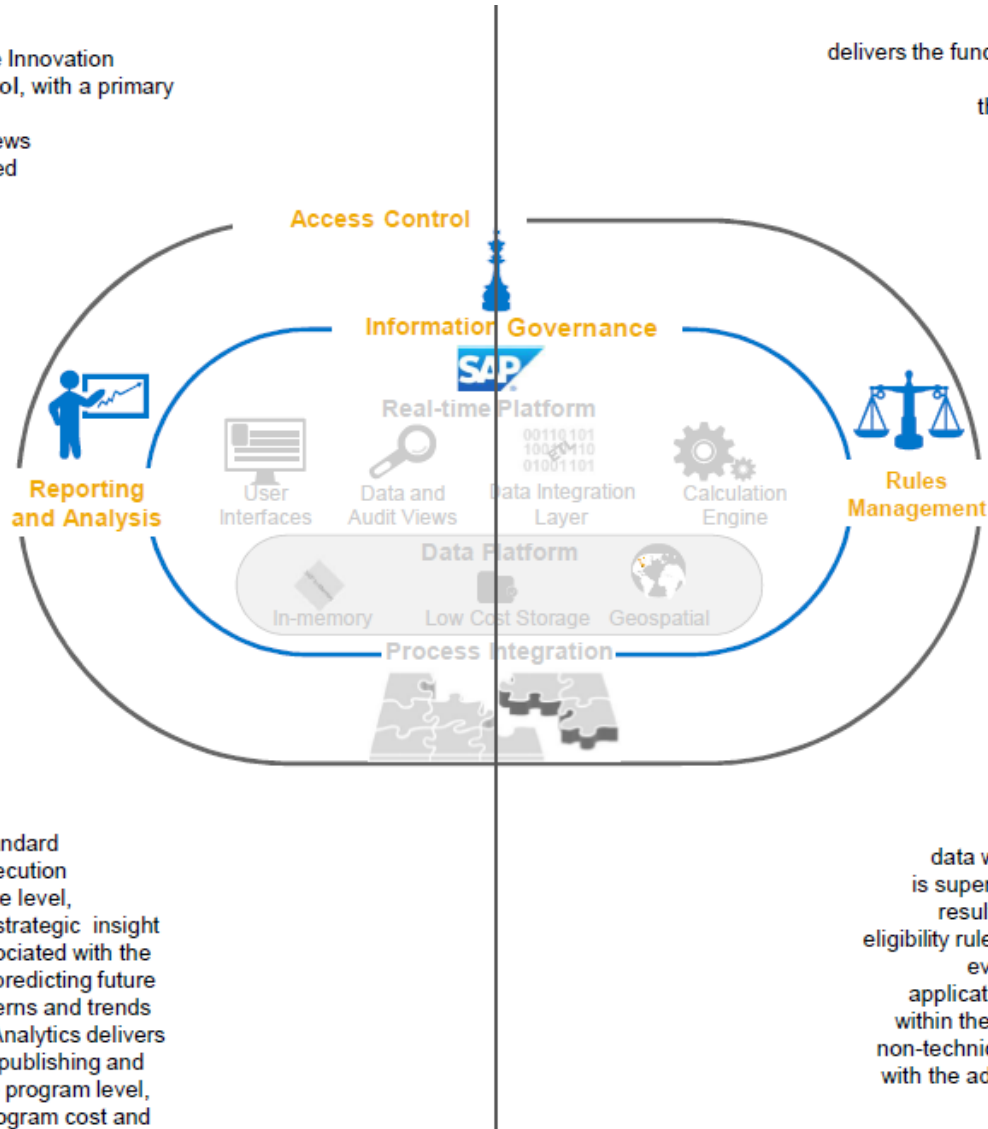


Access Control

The encapsulating functionality of the Innovation Technology offering is Access Control, with a primary purpose of ensuring segregation of duties and limiting access to data, views and reports in accordance with defined security procedures. Access Control delivers complete auditability and traceability.

Information Governance

delivers the functionality to manage data according to a configurable life cycle and thus ensures compliance with EU data privacy and information management laws. Furthermore – Information Governance delivers data quality management and spans the entire Create, Read, Update and Delete (CRUD) process with earliest point deletion being enforced



Reporting and Analysis

provides the operational and executive insight that allows for decision making. At the operational Level – information is delivered in standard reports to manage the day-to-day execution of the EES and RTP. At The Executive level, Reporting and Analytics delivers the strategic insight as to the broader considerations associated with the EES and RTP – migration statistics, predicting future border volumes, and identifying patterns and trends in security breaches. Reporting and Analytics delivers outward legislative and performance publishing and enables effective management at the program level, i.e. EES and RTP future direction, program cost and

Rules Management

provides a configurable and reusable framework for the capture, definition and deployment of rules according to which acquired data will be processed. Rules Management is superimposed on data to generate a lawful result – examples of its application include eligibility rules, criteria for refusal, notification, and evidentiary information on the refusal of application. The power of Rules Management within the Innovation Technology offering is the non-technical nature of definition and application with the added benefit of unmatched processing performance.

The SAP proposition for the European Union



The Real-Time Platform

is the heart of the Innovation Technology offering – its embedded capabilities combine to provide the capability to process travelers within the EES and RTP, which can be deployed as two separate instances on a single offering or as a consolidated instance upon the Innovation Technology offering (with the logical separation of information processes, rules, etc.). The embedded capabilities of the Real-Time Platform include

User Interfaces

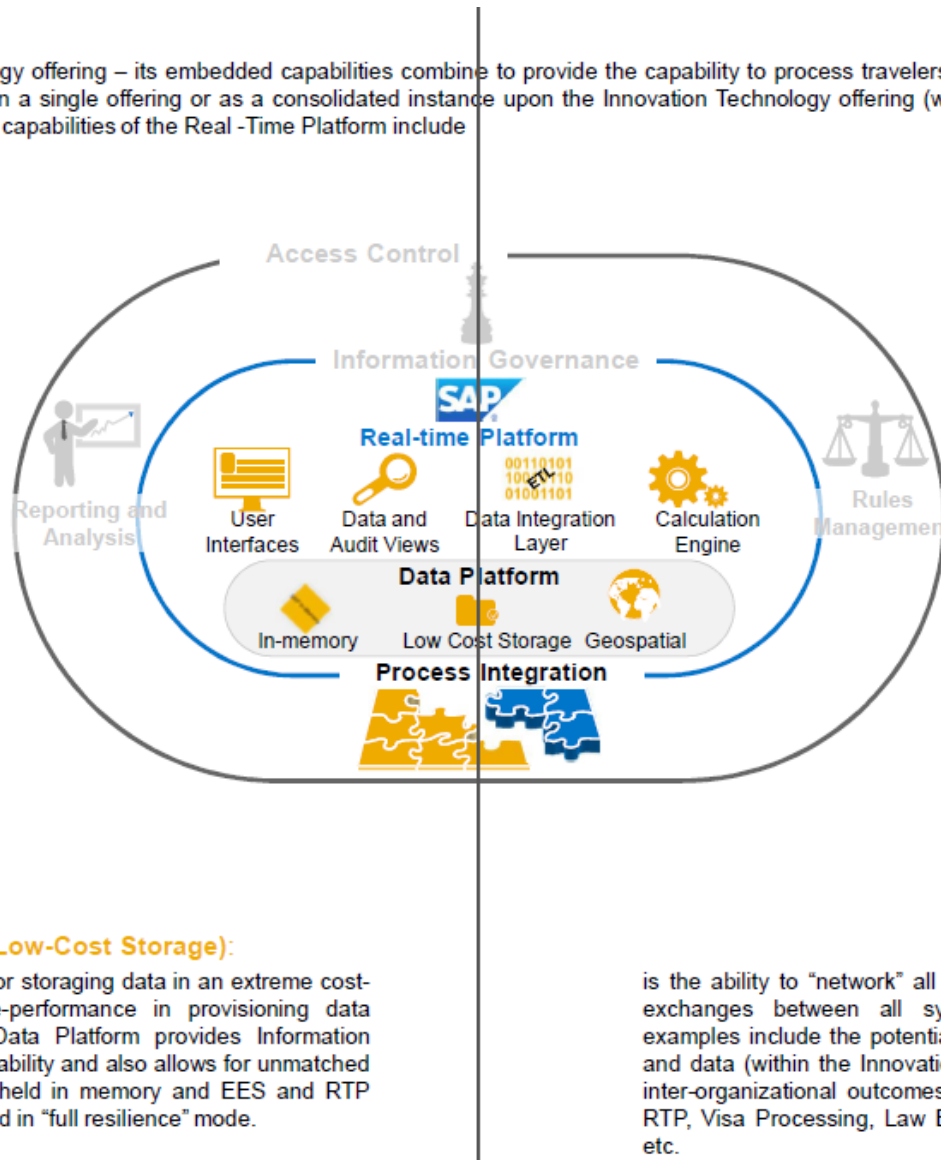
Common applications, forms and access to the data that is processed within the EES and RTP. These interfaces are the standard forms, lists, information displays and searches – each of which can be deployed “device independently” (desktop, smartphone, Google Glass, tablet, etc.)

Data and Audit Views:

The superimposition of perspective onto EES and/ or RTP data to reflect relevant, appropriate, and authorized information. For Audit views, “perspective” is filtered on audit-relevant information (including metadata).

Data Platform (In-Memory and Low-Cost Storage):

The Data Platform is the mechanism for storing data in an extreme cost-effective manner and the real time-performance in provisioning data processes to EES and RTP. The Data Platform provides Information Lifecycle Management as a native capability and also allows for unmatched data compression – all travelers are held in memory and EES and RTP functionality is executed in real time and in “full resilience” mode.



Data Integration Layer

This is a comprehensive capability according to which any data field is extracted (across systems and processes), transformed (according to defined rules) and loaded from one system to another (or one process to another) in supporting the Comprehensive execution of EES and RTP processes.

Calculations Engine

This is the calculation capability that executes defined calculations for comparison against the rules as contained within Rules Management – calculation for EES and RTP processes is concluded by the calculation engine (in real time).

Process Integration

is the ability to “network” all processes and real-time information exchanges between all systems and users. of Application examples include the potential for controlled access to processes and data (within the Innovation Technology offering) for intra and inter-organizational outcomes – processing of data for EES and RTP, Visa Processing, Law Enforcement, Third Country Queries, etc.

The SAP proposition for the European Union



Feasible

Process governance, native integration, and secure interoperability ensure feasibility.

Viable

Characteristics of the Information Technology offering can deliver lower implementation and operational costs – these characteristics include configuration rather than development, native integration, comprehensive functionality (addressing current and potential future requirements), and scalability (caters for a large user base, with extensive underlying data).

Desirable

The SAP Information Technology offering delivers native security in the form of comprehensive Access Control and Information Governance. Furthermore – the offering is based upon leading practice and proven technology that can even support the future harmonization of border check procedures across Member States.



The SAP vision – Border Management of the future



Real-time Border Control Operations Centre

At SAP, we envision a future where the SAP Real-Time Platform for Smart Borders delivers consolidated information (for all member states) at an operational and strategic level in many formats.

This information allows relevant authorities to make decisions and drive actions. Information is delivered as “alerts” with corrective actions being triggered and third parties engaged (through system communication).

At the touch of a button insight is derived, decisions concluded, stakeholders engaged, and outcomes achieved.

The SAP vision – Border Management of the future



Predictive Analytics

The amount of data that can be stored in the SAP Real-Time Platform is infinite and allows for real-time risk assessment of all travelers.

Flexible rules can be applied on the data (through analytics) to assess risk and then suggest cases where intervention from border guards is required.

The Real-Time Platform can automatically suggest the relevant parameters that influence a specific risk (such as the spread of a contagious disease in Europe) and trigger an alert for potential suspects entering the Schengen area.



The SAP vision – Border Management of the future



Mobility

Building upon predictive analysis, risk data can be pushed to border guards (in intuitive and graphical formats) to facilitate exception processing for identified risk cases.

As an example, all travelers that meet the criteria for exception processing (for example, a contagious disease) are “marked” as high, medium, or low risk. This classification is then presented to border guards on a mobile device.

Border guards can then identify relevant travelers and leverage operational procedures (pushed to their mobile device) in undertaking mitigation actions. The SAP User Interface allows for integration across all mobile devices (across smartphones and tablets), as well as the latest mobile innovations such as Google Glass. In the future, when a traveler registers biometrics, data is passed to the border guard on Google Glass, thus significantly enhancing process execution.

The SAP vision – Border Management of the future



Real-Time Situational Awareness

The power of the SAP Real-Time Platform is that it can be extended to manage extra-ordinary events such as terror attacks and to pre-empt these threats (in conjunction with law enforcement agencies across the EU). The platform can instigate immediate full closure of EES or RTP or trigger alerts for more comprehensive “checks” (in identifying key suspects or risk).

SAP believes that real-time situational awareness is a great benefit that can be delivered through the EES and RTP, over and above the core requirements of the Smart Borders initiative.



Fighting youth unemployment and the ICT skills shortage



As part of our commitment to the European Union and our digital future, SAP is currently collaborating with the European Commission to tackle the problem of unemployment among young professionals.

To this end, SAP participates in the EU Grand Coalition for Digital Jobs, for which we have provided an online training and job matching platform called the Academy Cube.

Smart grids for Europe



We offer recommendations to European policy-makers to enable transformations driven by Information Communication Technology (ICT) – as an example, we have collaborated with the EU to enable more efficient and sustainable delivery of energy, in accordance with the EU's sustainability aspirations for 2020.

Support Europe's cloud initiative



- We contribute by bringing “know-how” and advisory services to the European Cloud Partnership – our active contribution to this partnership entails European enablement for the establishment of a single market for cloud computing in Europe.
- We participate in the Cloud Selected Industry Groups (C-SIG) set up by the European Commission to advance the cloud certification scheme and to develop a code of conduct for data protection in the cloud.
- We contribute our expertise in the EU Network and Information Security Platform, which aims to foster trust and market adoption of new technologies by developing best practices in cybersecurity and the protection of personal data.

The aforementioned examples of our involvement in the EU demonstrate our commitment, capability, and expert capacity to make Europe a better and safer place to live in – likewise, we are also committed to supporting the EU in delivering against the objectives of the Smart Borders initiative. We are convinced that we are the right partner for you.

SAP has the innovation offering and the deep industry knowledge to cover today's and tomorrow's requirements for the Smart Borders initiative.

Based on 43 years of experience, SAP assists the world's largest and most prominent governments and organizations in their transformation projects.

SAP's key asset and differentiator is our natively integrated platform, upon which we deliver "off-the-shelf" technology components. This approach makes us as the world's largest provider of Enterprise Application Software – with the potential for minimized implementation risk, speed to value and lower cost of ownership.

The SAP Real-Time Platform further allows for ease of integration with existing IT landscapes (VIS, SIS and EURODAC – currently relevant for the Smart Borders initiative).



Worldwide Leader as recognized by independent industry analysts

Gartner recognizes SAP as a leader in the areas of operational database management systems (SAP HANA), BI platforms, corporate performance suites, data integration tools and data quality tools.



Exploit our innovation and knowledge in public sector

SAP has a long history within the public sector, with more than 20,000 customers globally, spanning large federal central agencies, to small, local municipalities. SAP solutions optimize public administration processes and improve service responsiveness to help governments achieve shared outcomes.



SAP Premium Support

SAP Premium Support provides customized on-site quality management programs that include proactive and preventive support – customers have a direct line to an SAP expert, who takes an active role in the implementation to reduce overall project risks and ensure on-time go-live.



Co-innovation with SAP

SAP enables rapid co-innovation with customers for individualized software development to innovate robust software solutions.

SAP Custom Development can deliver specific functionalities for local and niche markets with software maintenance and support provided as a package.



Choice and flexibility

With SAP, our Customers benefit from access to a large ecosystem of partners. This allows for choice in implementation and deployment, linked to a community of more than two million members, thus enabling greater flexibility.