

# Factsheet Germany

## Main interoperability activities

Germany has no formal National Interoperability Framework defined. Germany has established the following activities to promote interoperability on the different levels set forward by the EIF:

- Technical interoperability is achieved by Germany's standardisation initiative SAGA 5.0.
- Semantic interoperability is achieved by the XÖV initiative.
- Organisational interoperability is supported by the National Process Library initiative.
- Legal interoperability is partly governed by the IT Planning Council and the IT Council<sup>1</sup> respectively.

The main tool to improve the technical interoperability in German is the SAGA 5.0<sup>2</sup> (previously known as 'Standards and Architectures for eGovernment Applications'). This version is from November 2011<sup>3</sup>. Contrary to the previous version, there is modularisation of the document; it is split up in three parts. SAGA now starts with a "5" as the major version number, followed by a sequential number that is incremented with each amendment or revision of a module. This means that updates of each module can be performed independently of one another. The current version consists of three parts that can be downloaded separately:

- "Grundlagen<sup>4</sup>": describes the objectives, frameworks, principles, and processes for the creation and updating of SAGA
- "Konformität<sup>5</sup>": explains how the SAGA conformity of software systems can be backed up and explained.
- "Technische Spezifikationen<sup>6</sup>": the actual requirements and recommendations of IT specifications are for new and existing software systems, and products for custom development.

Germany pursues complementary to SAGA a number of initiatives on interoperability (see below).

## Summary of the NIF

As can be deduced by the information presented above, the NIF of Germany is not a single document but a compilation of initiatives that constitute the ongoing efforts around interoperability (see below).

However, more specifically it can be stated that SAGA 5 is a mandatory technology catalogue for all software systems of the German federal administration. It is a compilation of references to IT specifications and methods for software systems

SAGA's **scope of validity** covers the federal administration SAGA and is used in procurement, creation and development of software systems. The SAGA specifications apply to all new software systems. A

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<sup>1</sup> IT Council, [http://www.cio.bund.de/SharedDocs/Publikationen/DE/Bundesbeauftragte-fuer-Informationstechnik/konzept\\_it\\_steuerung\\_bund\\_download.pdf?\\_\\_blob=publicationFile](http://www.cio.bund.de/SharedDocs/Publikationen/DE/Bundesbeauftragte-fuer-Informationstechnik/konzept_it_steuerung_bund_download.pdf?__blob=publicationFile) (accessed 29/03/2013)

<sup>2</sup> SAGA 5.0, [http://www.cio.bund.de/DE/Architekturen-und-Standards/SAGA/SAGA%205-aktuelle%20Version/saga\\_5\\_aktuelle\\_version\\_node.html](http://www.cio.bund.de/DE/Architekturen-und-Standards/SAGA/SAGA%205-aktuelle%20Version/saga_5_aktuelle_version_node.html) (accessed 5/11/2012)

<sup>3</sup> SAGA 5.0 press release, [http://www.cio.bund.de/SharedDocs/Kurzmeldungen/DE/2011/20111104\\_it\\_rat\\_beschliesst\\_saga\\_5.html](http://www.cio.bund.de/SharedDocs/Kurzmeldungen/DE/2011/20111104_it_rat_beschliesst_saga_5.html) (accessed 5/11/2012)

<sup>4</sup> Grundlagen 5.1.0 [http://www.cio.bund.de/SharedDocs/Publikationen/DE/Architekturen-und-Standards/SAGA/saga\\_modul\\_grundlagen\\_de\\_bund\\_5\\_1\\_0\\_download.pdf?\\_\\_blob=publicationFile](http://www.cio.bund.de/SharedDocs/Publikationen/DE/Architekturen-und-Standards/SAGA/saga_modul_grundlagen_de_bund_5_1_0_download.pdf?__blob=publicationFile) (accessed 5/11/2012)

<sup>5</sup> Konformität 5.1.0 [http://www.cio.bund.de/SharedDocs/Publikationen/DE/Architekturen-und-Standards/SAGA/saga\\_modul\\_konformitaet\\_de\\_bund\\_5\\_1\\_0\\_download.pdf?\\_\\_blob=publicationFile](http://www.cio.bund.de/SharedDocs/Publikationen/DE/Architekturen-und-Standards/SAGA/saga_modul_konformitaet_de_bund_5_1_0_download.pdf?__blob=publicationFile) (accessed 5/11/2012)

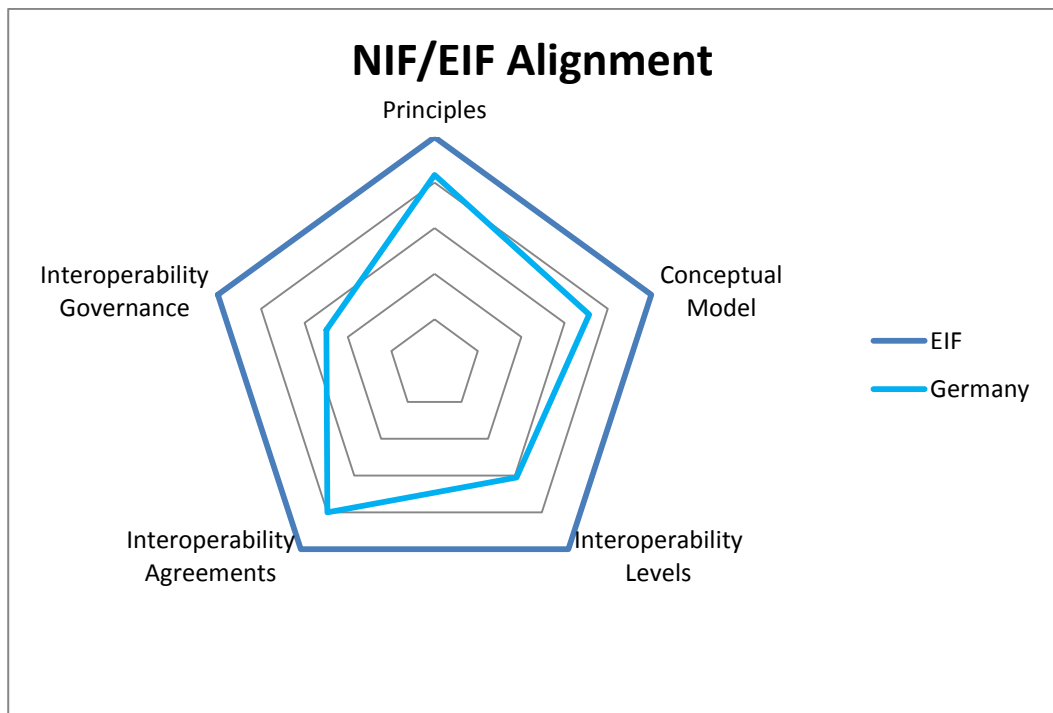
<sup>6</sup> Technische Spezifikationen 5.0.0 [http://www.cio.bund.de/SharedDocs/Publikationen/DE/Architekturen-und-Standards/SAGA/saga\\_modul\\_tech\\_spez\\_de\\_bund\\_5\\_0\\_download.pdf?\\_\\_blob=publicationFile](http://www.cio.bund.de/SharedDocs/Publikationen/DE/Architekturen-und-Standards/SAGA/saga_modul_tech_spez_de_bund_5_0_download.pdf?__blob=publicationFile) (accessed 5/11/2012)

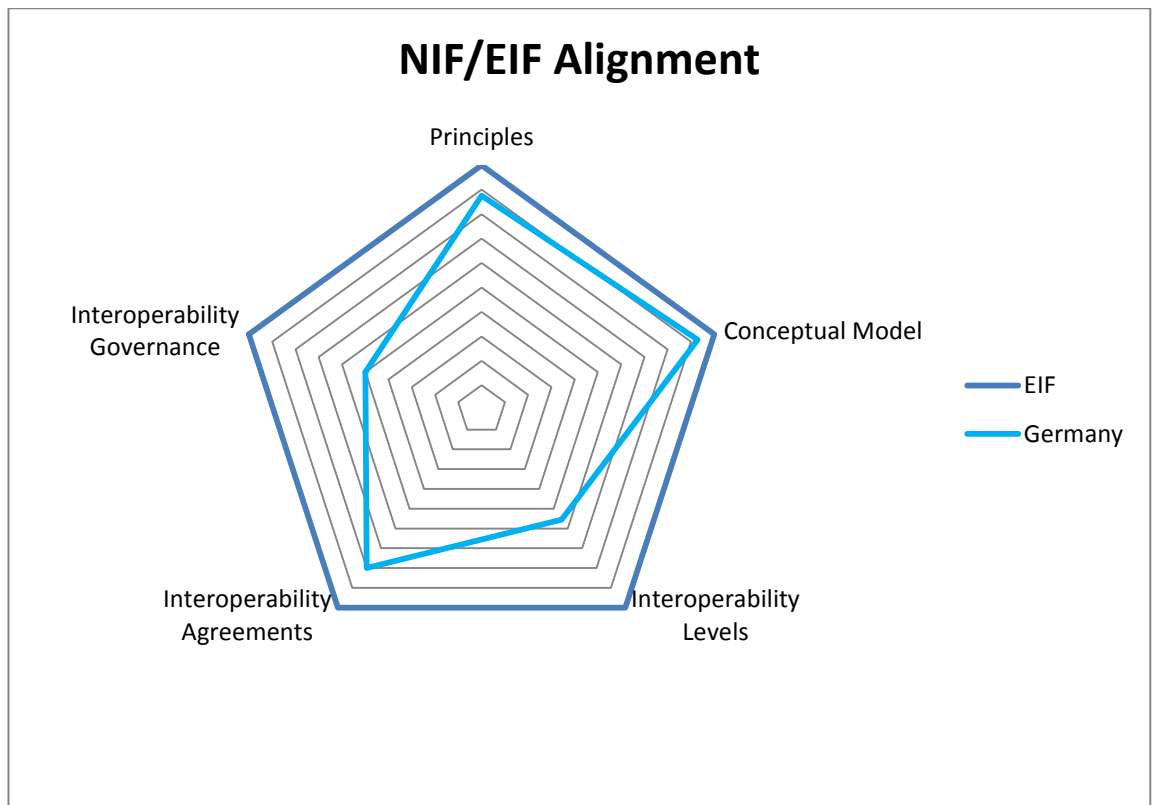
software system is new, if there is no ancestor or if the predecessor is fully replaced without reusing software units of the previous system.

**SAGA conformance** of an application is evaluated on the basis of the models, procedures and standards described in module “SAGA Konformität”.

## Alignment NIF/EIF

The German NIF has a very strong alignment with the EIF on the ‘principles’ and the ‘interoperability agreements’. There is a good alignment on the ‘conceptual model’. The alignment is slightly lower on the ‘interoperability levels’. There is a partial alignment with the EIF on governance.





SAGA aligns with ten of the twelve EIF **principles**. These ten principles are: Subsidiarity and proportionality, User-centricity, Inclusion and accessibility, Security and privacy, Administrative simplification, Transparency, Preservation of information, Openness, Reusability and Effectiveness and efficiency. SAGA aligns partially with one of the EIF principles, Technological neutrality and Adaptability. The principle of multilingualism is not taken into account.

The SAGA 5.0 module Grundlagen no longer presents a conceptual model as was present in previous versions of SAGA. The technical specifications document of SAGA makes clear that a Service Oriented Approach is taken. The document on the “Rahmenarchitektur IT-Steuerung Bund<sup>7</sup> v1.0” does contain the model represented by the different architectures. The Deutschland-Online (DOL) strategy aims to create a fully integrated eGovernment landscape in Germany, so that electronically captured data can be exchanged between the administrations of the Federal Government, federal states and municipalities in a consistent manner and across all levels. XöV now provides for XML standards that interconnect loosely coupled service components and a separate entity (BSI) is responsible for general IT security. The **interoperability levels** are partially described in SAGA 5.0 module “Grundlagen”. SAGA focuses on technical interoperability as technical standards are defined in the module “Technische Spezifikationen<sup>8</sup>”. There are however a number of other initiatives that each support their specific interoperability level.

From a legal level, the technical, semantic and organisational interoperability initiatives are steered by the **IT council** on the federal level and by the **IT planning council** on the level of the cooperation between the federal government and the federal states (“Länder”). Their main tasks towards achieving interoperability is to put forward standards, which are used in public procurement, to develop commonly used software systems to solve particular problems (e.g. a records management system) and to manage the different interoperability initiatives.

The **National Process library** is an IT Planning Council project to foster organisational interoperability. The National Process Library allows for sharing processes across different administrative bodies. The idea

<sup>7</sup>[http://www.cio.bund.de/SharedDocs/Publikationen/DE/Architekturen-und-Standards/rahmenarchitektur\\_itsteuerung\\_bund\\_grundlagen\\_download.pdf?\\_\\_blob=publicationFile](http://www.cio.bund.de/SharedDocs/Publikationen/DE/Architekturen-und-Standards/rahmenarchitektur_itsteuerung_bund_grundlagen_download.pdf?__blob=publicationFile)

<sup>8</sup> Technische Spezifikationen 5.0.0 [http://www.cio.bund.de/SharedDocs/Publikationen/DE/Architekturen-und-Standards/SAGA/saga\\_modul\\_tech\\_spez\\_de\\_bund\\_5\\_0\\_download.pdf?\\_\\_blob=publicationFile](http://www.cio.bund.de/SharedDocs/Publikationen/DE/Architekturen-und-Standards/SAGA/saga_modul_tech_spez_de_bund_5_0_download.pdf?__blob=publicationFile) (accessed 5/11/2012)

is that every person working for a public administration can publish and share his/her processes on the National Process Library. The National Process Library exists as prototype and is going to go live next year. It is also planned to connect the National Process Library to the Joinup platform to enable sharing the processes across Europe (see respective EFIR project in the ISA Working Programme).

**XÖV standardization:** To achieve semantic interoperability in the electronic data exchange within and with the public administrations, common rules for developing and maintaining standards for electronic data interchange (XÖV standards) are developed and coordinated. The XÖV standards for the different administrative domains are stored in the XRepository. The XRepository will become a member of the Joinup-ADMS platform later this year. This membership allows sharing the XÖV standards across Europe.

XÖV standards are open, royalty free standards, which describe the electronic data exchange within and between different administrative bodies and/or between administration and industry. Openness means that the development process and the access to the standard are open, e.g. every standard can be downloaded for free from the XRepository. A certification process ensures proper quality of the standard. Some certified standards are mandatory for certain domains and/or are referenced or required by law.

Furthermore, it is key that standards, semantic agreements, organisational processes are aligned and managed appropriately to finally become effective. It is the responsibility of the Germany architecture initiative to manage Germany's central software and business architectures, e.g. to align business process to IT, to ensure that selected SAGA standards are actually used in software development and procurement, to add required standards to the SAGA process and to ensure that software-components are widely re-used.

The above-mentioned interoperability initiatives have the following scope:

- SAGA is mandatory only for the Federal Government. The counties (Länder) could use SAGA but it has no immediate effect for this administrative level.
- The XÖV standards are applicable for all administrative levels but are limited to certain domains, e.g. not all domains are covered by XÖV standards.
- The National Process Library currently is a prototype, which does not contain many processes. However, the National Process Library is available for all levels of the German administration.
- The IT council coordinates IT on the federal level only; the IT planning council coordinates between the federal and the county (Länder) level.
- The Architecture Management Initiative is a federal initiative meant for the federal IT. A counterpart on the county level – dealing with Germany's federal IT infrastructure – is currently designed.

The **interoperability agreements** described are well aligned with the EIF. SAGA does encourage the use of open specifications and has defined the life cycle of specifications.

Germany does have a partial **governance** framework as such defined. The IT council owns SAGA and is responsible for the definition of its scope and its development. It is also responsible for promoting SAGA.

The IT Planning Council also owns the national E-government strategy. It is responsible for its scope, definition and implementation. Monitoring will be put in place in the future.

## NIF responsibilities for Germany

Dr. Andreas Gehlert ([andreas.gehlert@bmi.bund.de](mailto:andreas.gehlert@bmi.bund.de))

Dr. Andreas Mück ([ReferatIT1@cio.bayern.de](mailto:ReferatIT1@cio.bayern.de))