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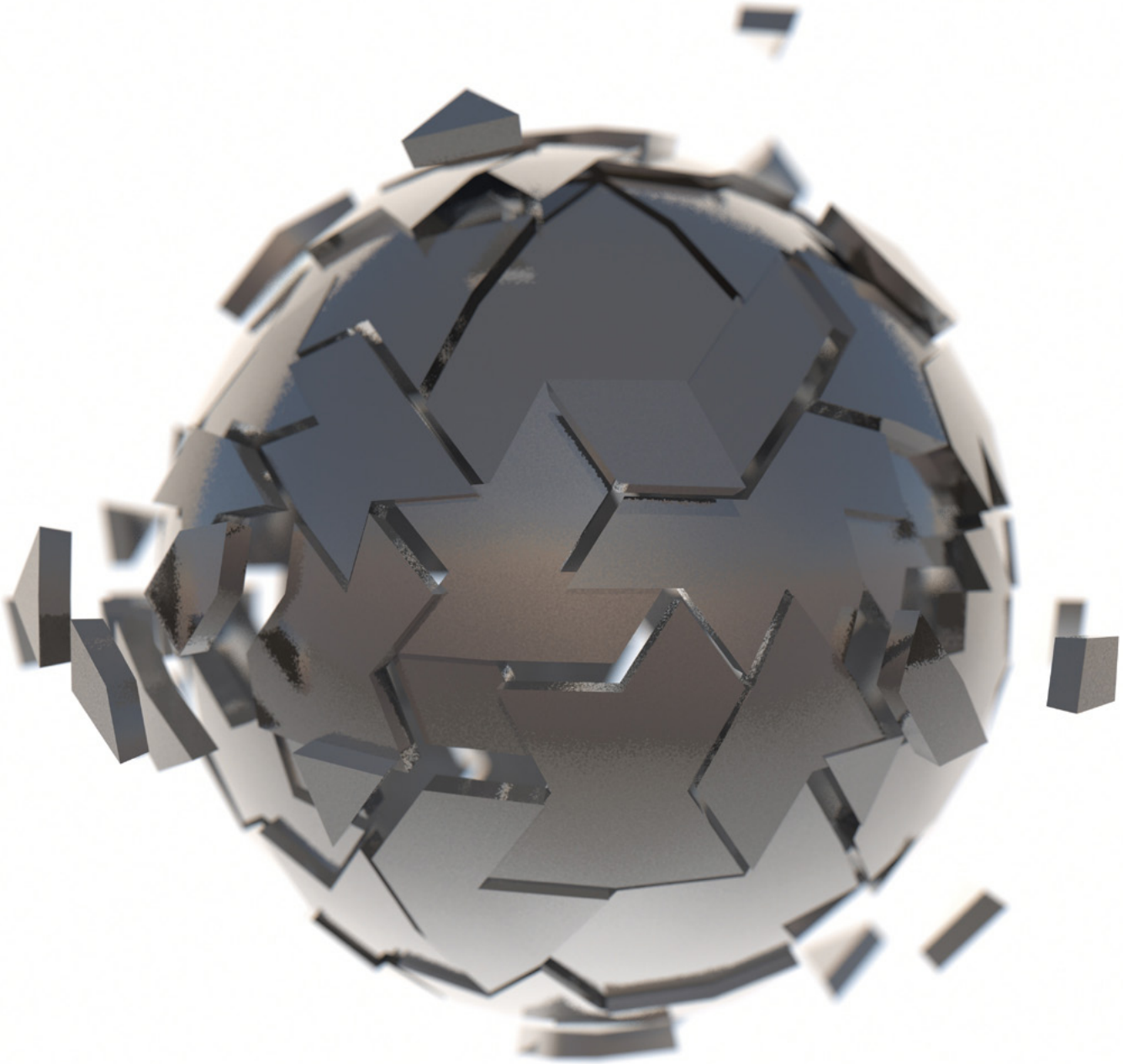
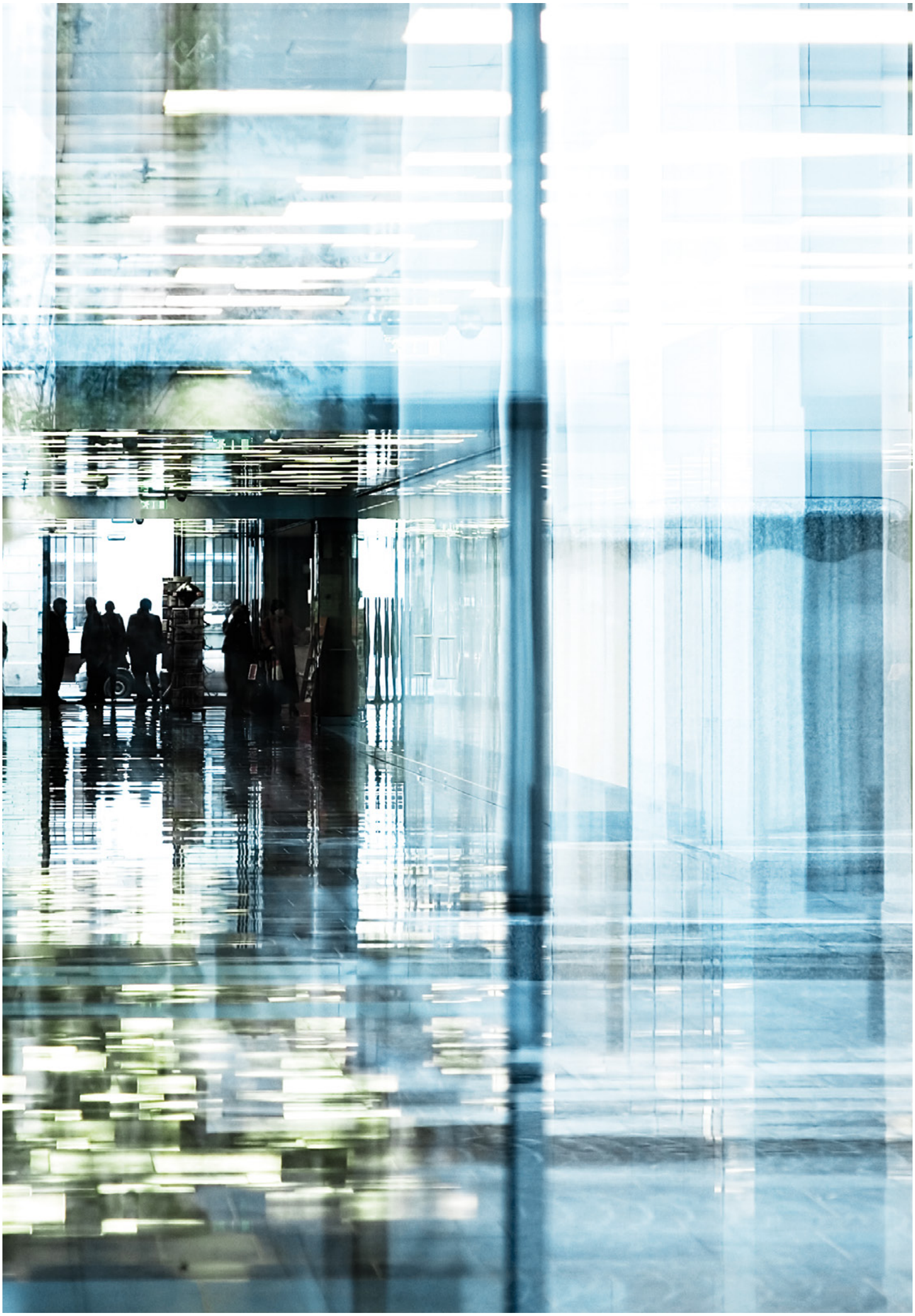


Increase IT Transparency & Steering Effectiveness

by integrating your CMDB and Architecture Repository

Consulting



Introduction

IT service management (ITSM)
refers to all measures and methods that are required by an IT organization to provide IT services and ensure that the services meet their needs, reach an acceptable level of performance, and are affordable for customers. In ITSM the IT is managed from the business perspective and organized as processes.

These processes include demand and portfolio management, services design (incl. service level agreement (SLA) definitions), service delivery (incl. release and change management) as well as service operations (incl. incident and problem management).

The overall management and each individual process is controlled by a PDCA-cycle (plan, do, check, act) to ensure continuous improvements.

ServiceNow
has disrupted the ITSM tool market by offering service management software as a service (SaaS) through a highly customizable platform. Out of the box it supports processes that are designed according to IT Infrastructure Library (ITIL). A central element is the configuration management database (CMDB) that allows visualizing the services and the supporting infrastructure, in order to identify potential impacts and risks, to enable better decision making.

Enterprise architecture management (EAM)
is a strategic business and IT management discipline which is applied in the analysis, design and planning at the edge between business activities and information technology. This is achieved by defining views on the enterprise architecture which consist of business, application, data and infrastructure elements (e.g. IT infrastructure components, business or IT applications, information and data and business related components such as business processes or capabilities). EAM also defines the guidelines for an overarching collaboration of architecture dimensions within a company. Hereby architecture standards are determined and, through everything as a service (XaaS) integrations, best-fit digital ecosystems are enabled to provide customer-centric services. One field of application at the boundary between EAM and ITSM is the analysis of dependencies which exist between business processes and applications, and supporting infrastructure, in order to answer exemplary questions such as:

- Which business processes rely on not supported IT components?
- Which business processes suffer outages if certain IT components fail?
- Which customer will be affected when IT components fail?

LeanIX
provides a cloud-based cutting edge SaaS solution, which has been available on the market since 2012. LeanIX allows rapid data collection, in order to identify the dependencies between information technology and business activities via dynamic, out of the box reports. In the field of enterprise architecture, LeanIX offers modern capabilities such as collaboration and information sharing as well as an integration with other IT management applications such as JIRA, Confluence, Signavio, Technopedia or ServiceNow.

Within our approach, we outline the different integration options for ServiceNow and LeanIX and derive benefits from such an integration.

Benefits of integrating ITSM & EAM

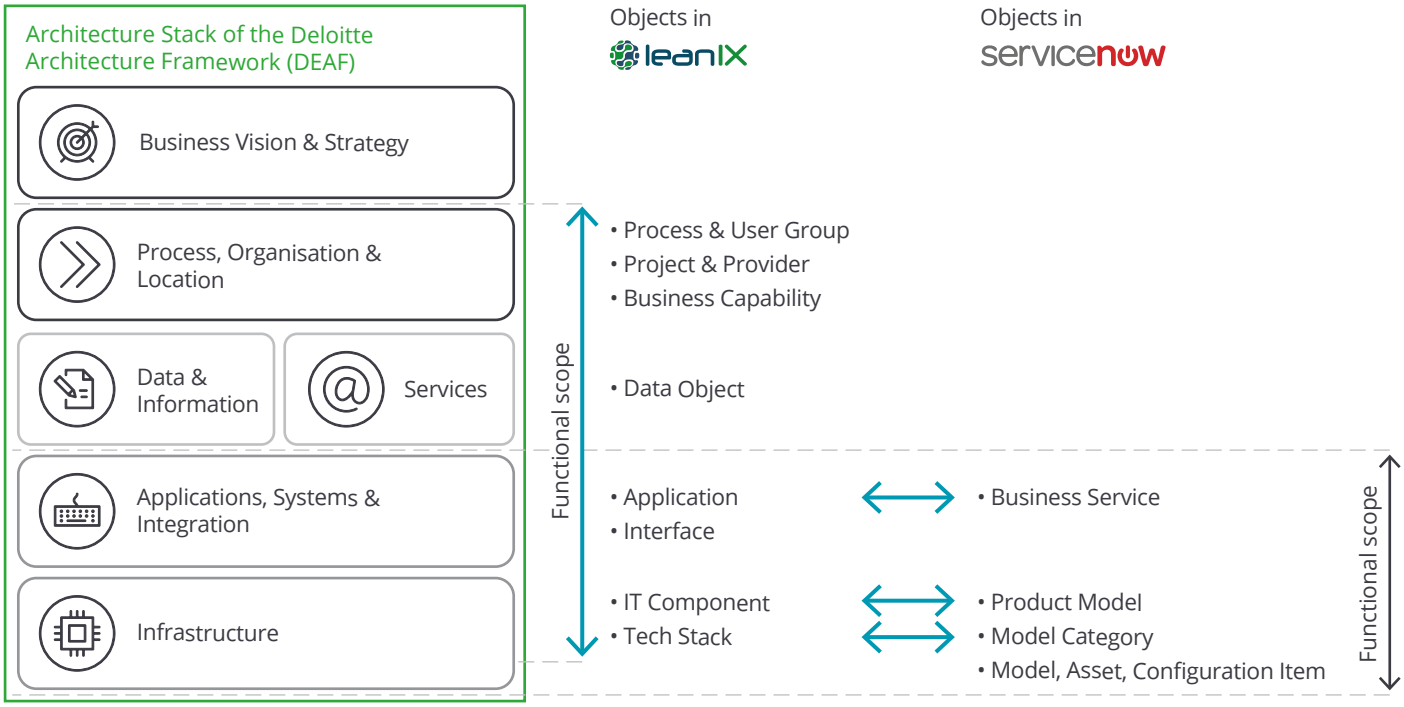
Enterprise architects operating in billion dollar businesses often face highly complex information systems that have grown over the years. Reasons are merger and acquisition activities, heterogenic growth forced by emerging technologies or just missing governance on IT. In contrast to managing complexity, business often demands rapid integration of new organizational entities, shortened software release cycles or fast adaption to emerging trends in order to limit effects on the top or bottom line. From an IT perspective this is done by simply adding additional (parts of) information systems to the existing IT landscape with limited effort to harmonize and consolidate.

Enterprise architects require information from other management disciplines and therefore act as information integrators. This helps to identify optimization potential within the current IT landscape and enables them to design a target architecture for optimal business support. Related disciplines and roles are required to deliver additional information to complete the picture:

- Business process managers offer business process landscapes
- Application managers have an overview on the current IT landscape
- License management or controlling hold information about applications used across the enterprise since license cost optimization is in scope
- IT operations or IT service management usually provide information about infrastructure components relevant for business applications

All this information needs to be integrated to identify critical dependencies, pain points and areas of improvement. In the following, the focus will be on the integration of EAM and ITSM. Both disciplines overlap on various architectural elements which is illustrated in Fig. 1.

Fig. 1 – Architecture objects in scope of LeanIX and ServiceNow



↔ Corresponding object in LeanIX and ServiceNow

The business value of integrating the disciplines of EAM and ITSM highly depends on the technical integration of applied tools. LeanIX and ServiceNow provide the technical capabilities to enable a tight integration and a smooth exchange of information.

In order to limit the enterprise architects effort for manual data collection, state-of-the-art tools such as LeanIX offer out of the box integration options. Similar integration options also exist for ServiceNow.
Based on our experience, enterprises benefit from enhancing this integration in order to receive additional information which is not provided by default. Fig. 2 illustrates possible additional integration objects.

For each data object one system is defined as the master system based on where the object is primarily managed. LeanIX should be treated as the master of building blocks of the enterprise architecture (such as Capabilities, Processes, Applications, Data Objects, etc.), whereas ServiceNow is the master of other objects like projects, vendors or IT components. Their life cycle is also managed in ServiceNow.

Examples of questions that may be answered through enhanced integration between ServiceNow and LeanIX are:

1. Which interfaces exist between systems? What systems are impacted by our future project roadmap?

2. Which business processes / capabilities are currently impacted by the project portfolio and does this fit to the business strategy?

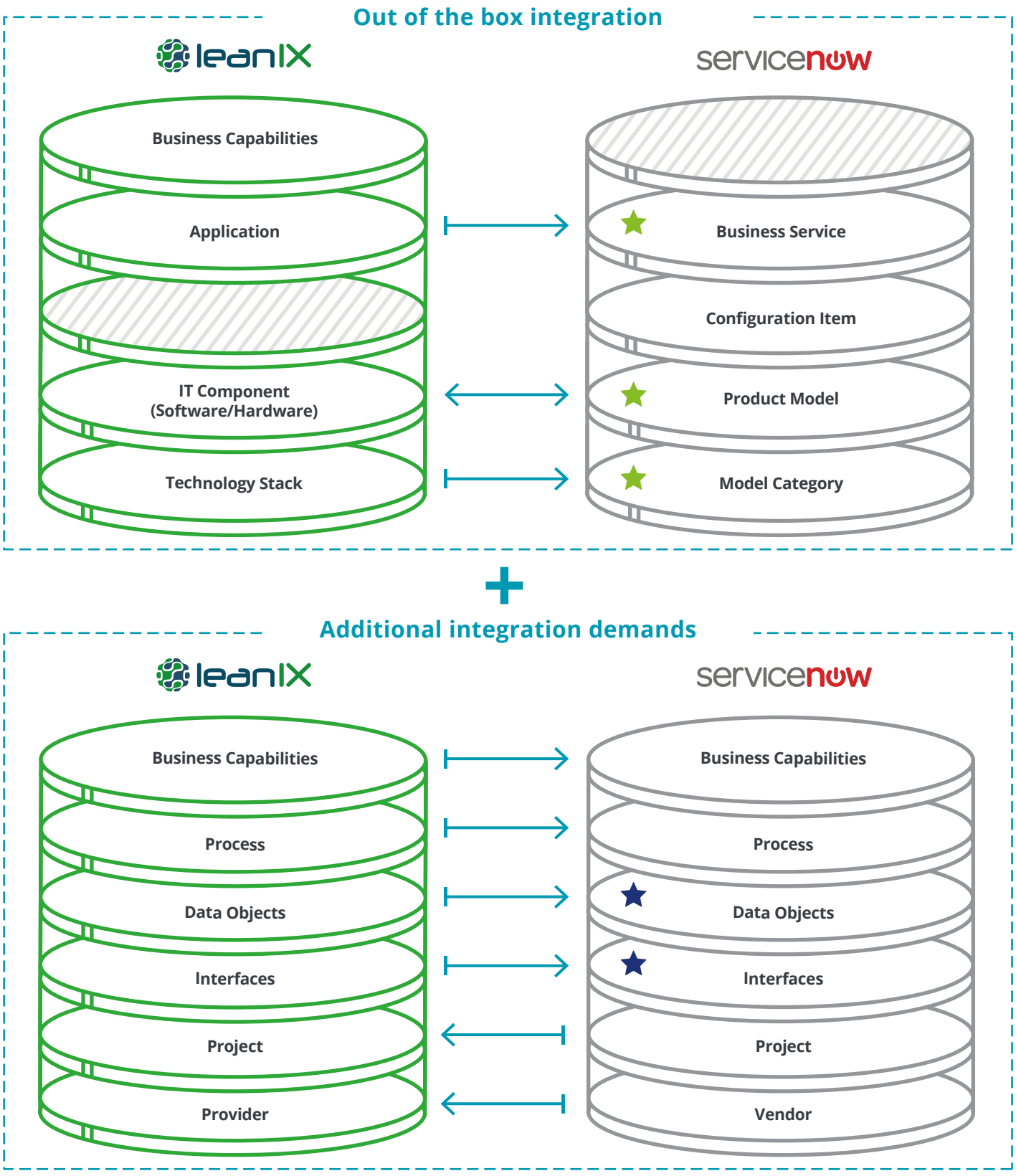
3. What does the vendor portfolio look like? What business processes / capabilities are dependent on what vendor and does this put mission critical functions at risk?

4. Where are critical data objects processed (e.g. customer information)?

5. Which applications are impacted by a sudden failure of hardware (e.g. unexpected server shut-down)?

6. What is the status of the technical platform (in terms of technical fit)?

Fig. 2 – Integration concept LeanIX and ServiceNow



Technical integration

ServiceNow and LeanIX offer state-of-the-art API and are open to any kind of integration concept.

Deloitte analyzed three major integration options regarding their advantages and disadvantages which should be carefully evaluated prior to implementation:

1. LeanIX webhook

LeanIX executes a web request to push information to ServiceNow whenever information change. In this scenario, ServiceNow receives and stores information and therefore acts as the central data repository.

Example:
A certain application factsheet gets updated in LeanIX. In this case, an automated webhook is executed to call a ServiceNow web service that stores the changed information in the CMDB.

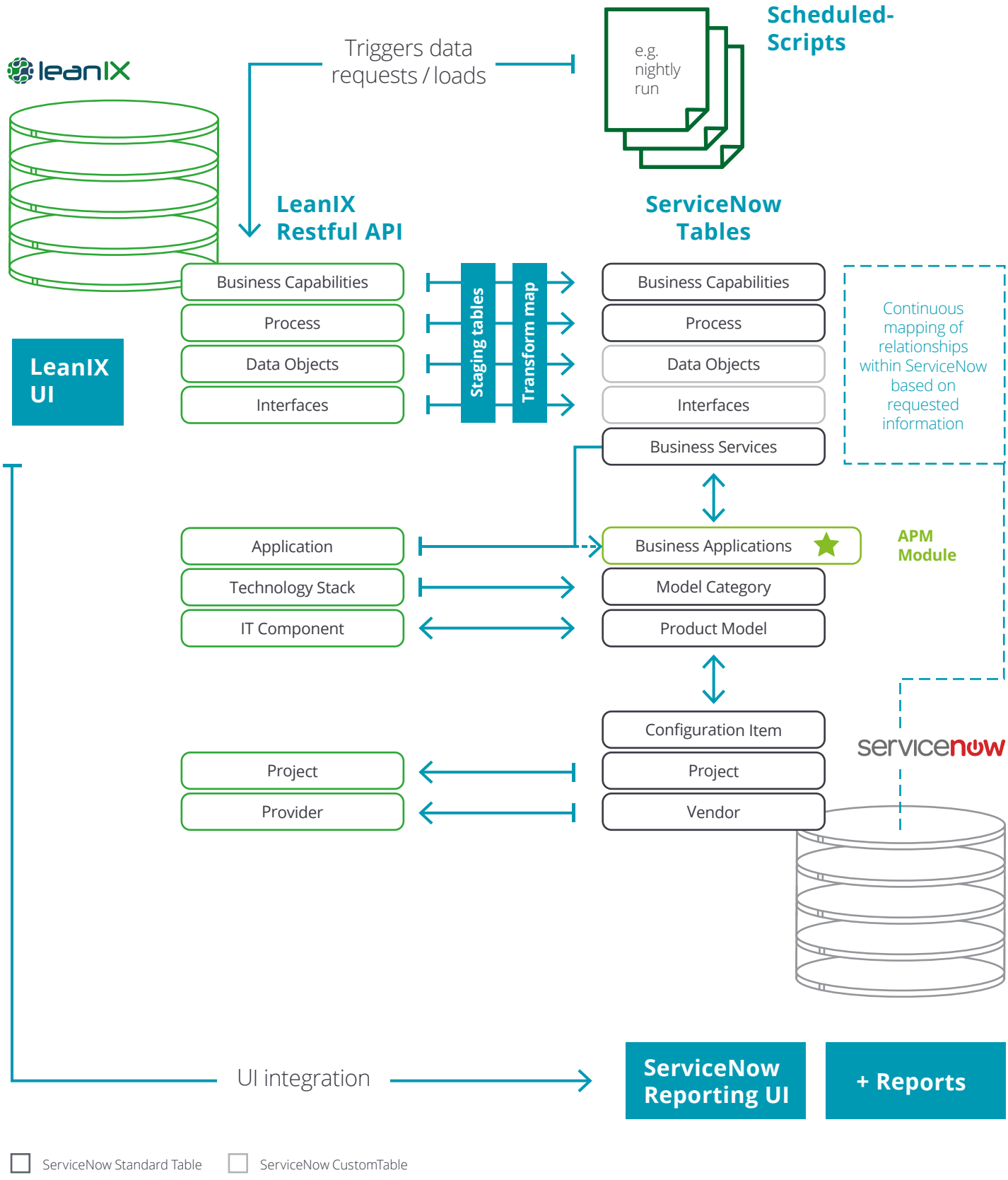
In this scenario, ServiceNow always has the latest information while LeanIX does not receive updates on any ServiceNow information (e.g. latest configuration item (CI) properties).

2. Batch jobs from ServiceNow to LeanIX

Nightly jobs load information from ServiceNow to LeanIX or vice versa. Both systems can act as the central data repository. This scenario leverages ServiceNow web service capabilities. It does not allow for live information exchange but limits the required amount of data exchanged. ServiceNow offers advanced extract, transform, load (ETL) and web service capabilities. Scheduled scripts can be used to implement nightly jobs that call or push information from / to LeanIX. Open LeanIX push interfaces are used to receive information from ServiceNow and automatically store it in its internal data structure. ServiceNow staging tables store incoming information and automatically push these information to transform maps which change incoming information into a format ready for further internal processing. Transformed information are then automatically stored in ServiceNow data structures.

In this scenario, both systems share information at a predefined time interval.

Fig. 3 – Integration option between LeanIX & ServiceNow by leveraging ServiceNow web service capabilities



3. Integration via integration layer (e.g. service bus)

An independent layer between both systems organizes information exchange. Both systems can be used as the central data repository and can be kept in sync at any time by sharing information in both directions. Further benefits of this option will be available if other data sources are connected. Since there is no point-to-point connection between data sources, this approach provides a higher flexibility in comparison to option 1 and 2.

If no enterprise service bus is already in use, the initial setup may be considered as a disadvantage. However, this integration option simplifies connecting further systems in the future.

Combination of option 1 and option 2:

It is also possible to combine integration option 1 and option 2. In this case, LeanIX pushes updates to ServiceNow, triggered by webhooks. Then a ServiceNow script can be executed which sends the latest CI information to LeanIX. This limits the downsides of option 1 and option 2 but increases the effort for an implementation. Also no single systems contains all relevant interface configurations.

In this scenario, it has to be decided what objects are primarily changed in what systems. This leading system acts as the primary data repository for these data objects. Other data objects should only be accessed in read-only mode.

It is important that the primary master data system for each data object is defined in advance.

Summary

Leveraging information from both worlds – ITSM & EAM – speeds up the process of information gathering, supports organizations to have up to date information regarding their enterprise architecture and facilitates decision making on the basis of valuable information.

ITSM processes benefit from strategic information, e.g. to classify the criticality of applications or infrastructure components based on its impact on business capabilities or processes.

EAM-based strategic planning benefits from up to date operational information. Examples are the availability or performance of infrastructure components, number of incidents per application or user satisfaction on services or applications. Strategic planning then will be able to identify improvement potential within the current landscape and to define a target architecture that supports future business success.

Our outlined approach of information gathering and exchange enables strategic and tactical decision making based on up-to-date information and on the fly analyses – a capability enterprises struggled within past decades.

Contact

Jochen Fauser
Partner
Lead Technology Strategy & Architecture
jfauser@deloitte.de

Dr. Peter Blome
Director
Lead ServiceNow
pblome@deloitte.de

Sebastian E. Zeeb
Senior Manager
Lead Architecture & Integration
szeeb@deloitte.de

Deloitte.

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