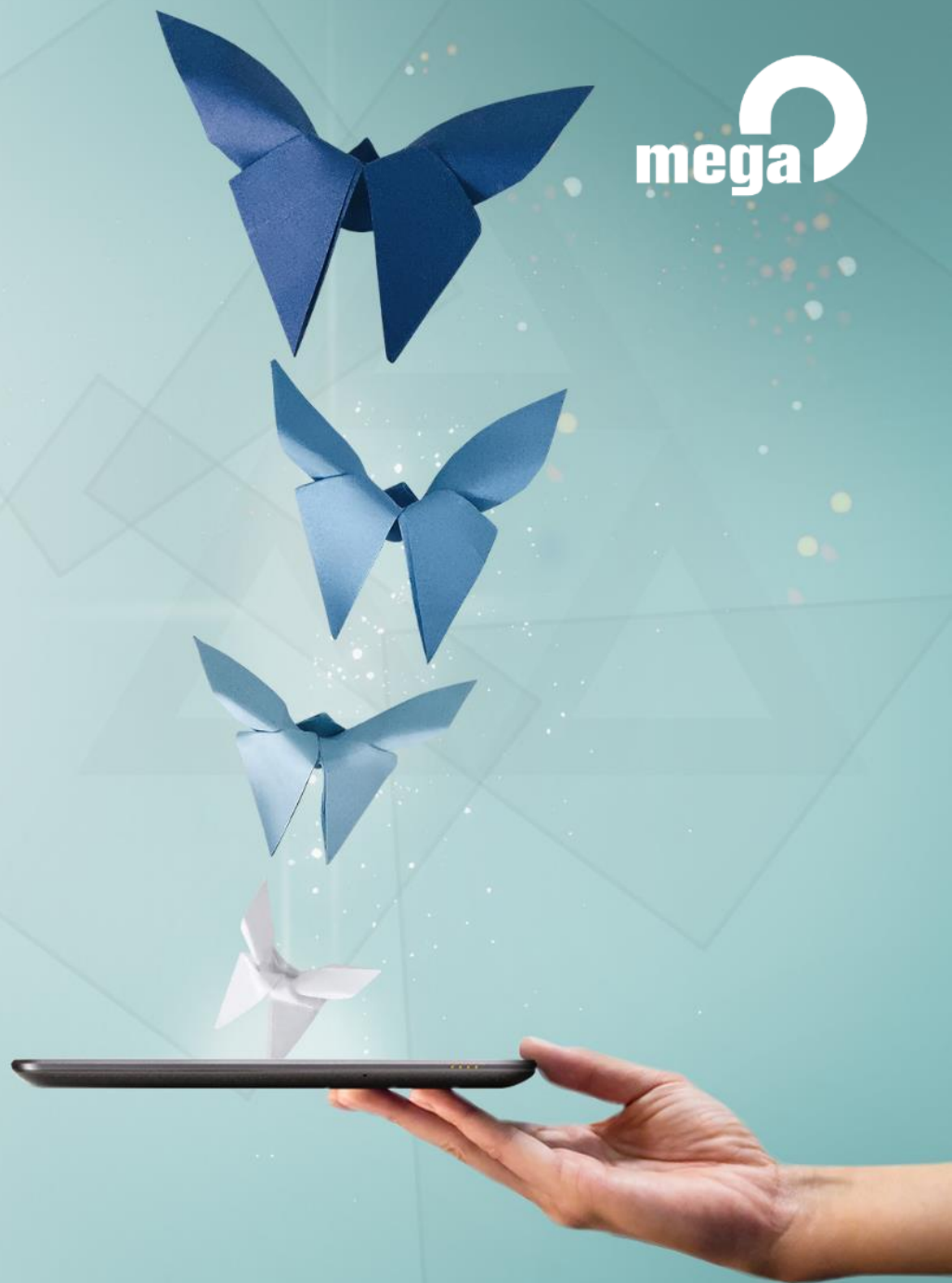


HOPEX Integration **servicenow**



API & Integration landscape

Ready to use

Web Service Catalog

Set of REST API to input or output data into the platform

Integration Catalog

Set of integration with other system and application

servicenow

Custom capabilities

Web Service Factory

Development toolkit to handle all your custom use cases

Integration Factory

Ad-hoc connector with third parties software

talend

Server API

HOPEX

mega

Explore Talend Data Fabric's suite of apps.



Cloud Integration



Stitch Data Loader



Talend Data Integration



Talend Big Data Integration



Cloud API Services



Talend Data Catalog



Talend Data Quality



Talend Data Preparation

Talend

- Talend has been the first to propose to market **open source** data integration software
- The company provides software and services in the areas of Data Integration (**ETL**), Data Management, Master Data Management, Data Quality, Big Data, Cloud...

Integration factory

- The integration factory leverage ETL features to enable multiple integration with other System.

ETL products provide

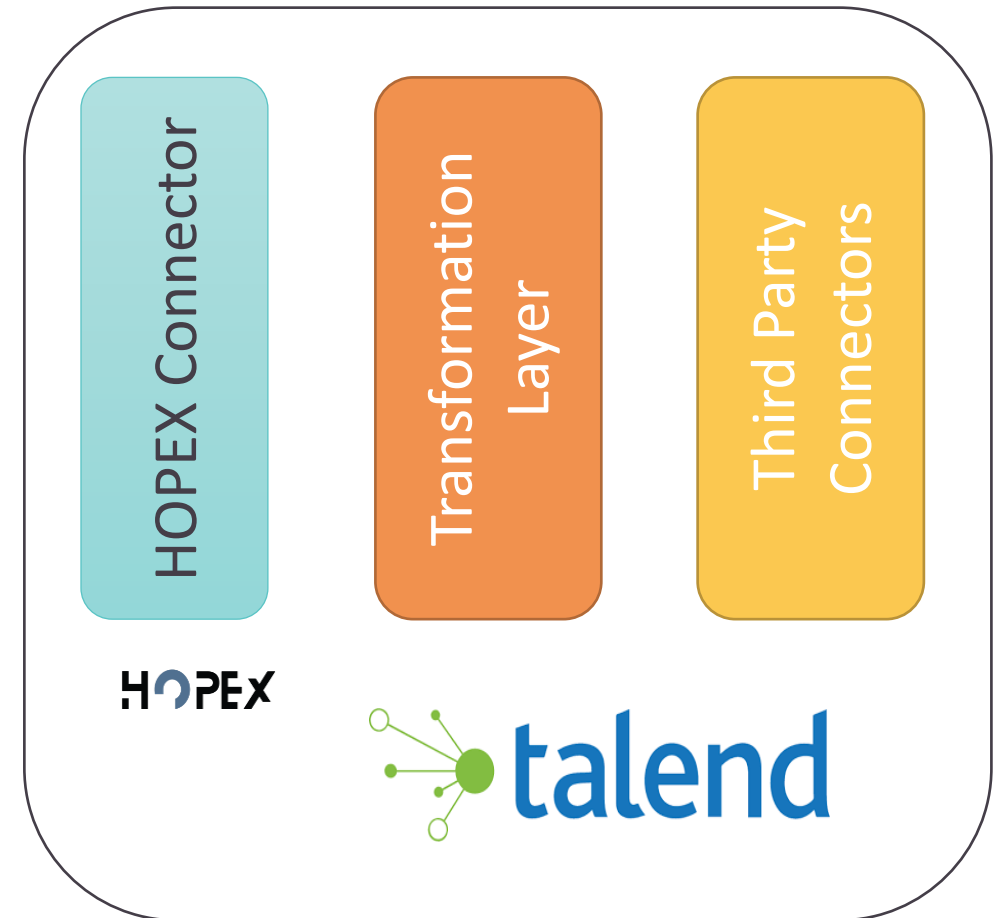
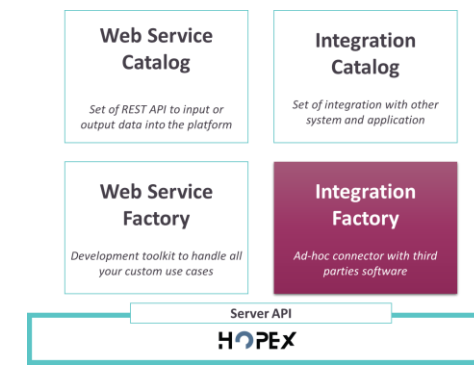
A versatile **transformation** component

Sequencing and **piloting** Extract/Transform/Load

All **execution** management features: retry, logs, rollback...

Some standard Extract and Load service points for different **formats**: Excel, XML, JSON, text, SQL tables,...

Some standard Extract and Load service points for popular **Software packages**: SAP, Service Now, etc...



API & Integration landscape

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mega



IT Workflows

Unlock productivity and transform IT across your enterprise with a unified platform.



Employee Workflows

Deliver next-gen employee experiences with intelligent workflows, effortless service and enterprise mobile.



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Resolve complex customer issues from end to end with predictive intelligence and automated self-service.



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Use the Now Platform to build new workflow apps and extend ServiceNow solutions.



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- **Service Now** 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 several modules such as ITSM, CMDB, HR...

Prerequisite and dependencies

Ready to use



Web Service Catalog

Set of REST API to input or output data into the platform



Integration Catalog

Set of integration with other system and application



Custom capabilities

Web Service Factory

Development toolkit to handle all your custom use cases



Integration Factory

Ad-hoc connector with third parties software



Server API

HOPEX



Agenda

- What use cases are covered by the integration?
- How does the integration work?
- How can you customize it?
- When will it be available?

Agenda

- **What uses cases are covered by the integration?**
- How does the integration works ?
- How can you customize it?
- When will it be available?

Why an integration ?

● HOPEX

- MEGA is a leader in business process modeling (BPA), enterprise architecture (EA) and Application portfolio Management (APM) solutions. The practice rely on rapid data collections of business and IT information.

● ServiceNow

- Service Now 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 several modules such as ITSM, CMDB, HR, GRC...

The discipline of ITSM, ITPM and EA share common business and IT needs that needs to be aligned to enhance the operational excellence of companies. Thus an integration of both systems bring valuable insight to the organization.

Concerned solution on each side ?

- **HOPEX**

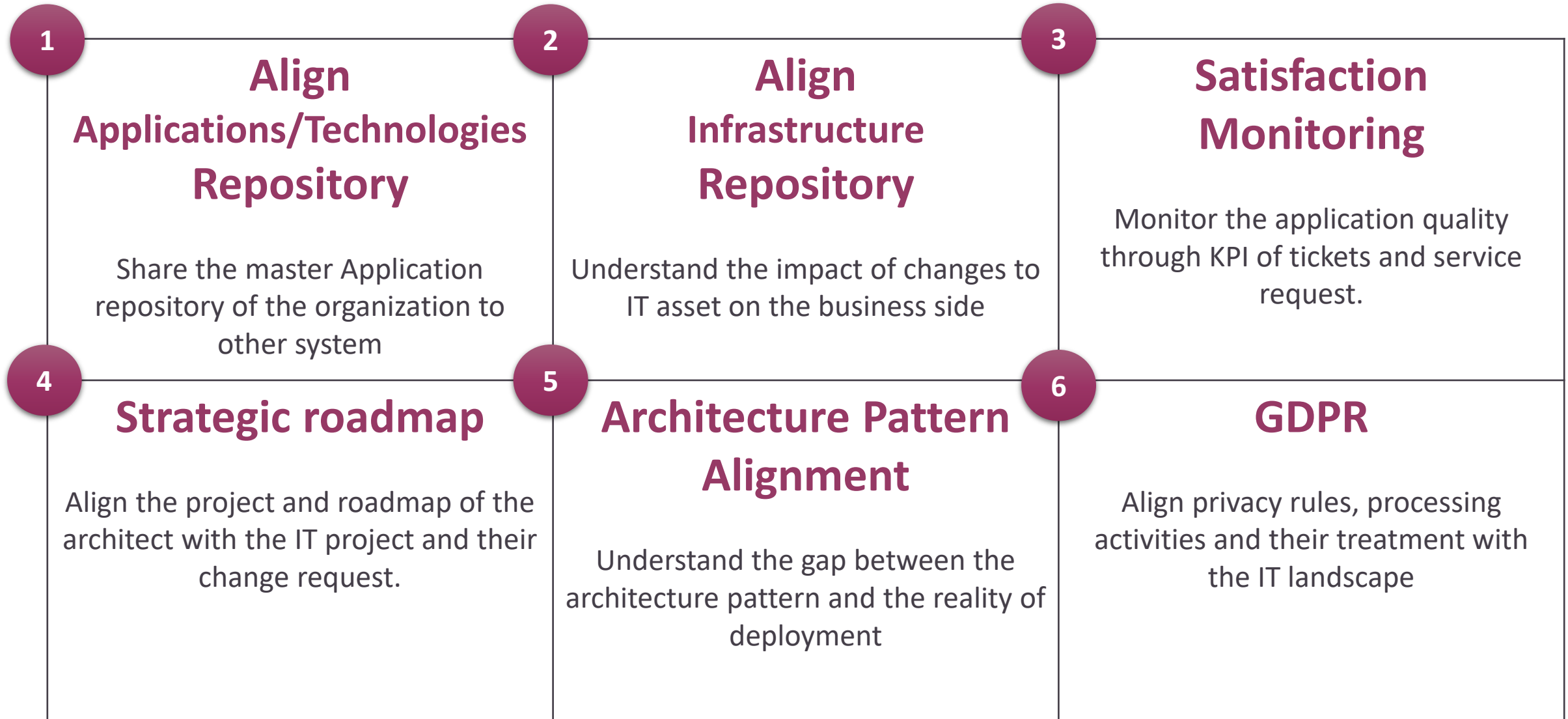
- ITPM
- Architecture
- GDPR

- **ServiceNow**












- CMDB / IT Asset
- Project Management
- Change Management :
Change Request / Service
Desk / Help Desk

Depending on the use case some or part of the module on each side will be concerned only.

Commonly seen use cases



Default and possible mapping

	HOPEX	Flow	servicenow
Business Layer	Business Capability		Business Capability (cmdb_ci_business_capability)
	Business Process		Business Process (cmdb_ci_business_process)
	Business Service Catalog		Service Catalog (sc_catalog)
	Org-unit		Company (cmn_location) Department (core_company)
	Person		User (sys_user)
Application Layer	Application		Business Service (Cmdb_ci_service) Business Application (cmdb_ci_business_app)
	Software Technology		Software Model (Cmdb_software_product_model)
	Software Technology Stack		Model Category (Cmdb_model_category)
Infrastructure Layer	Technical Service Catalog		Service Catalog (sc_catalog)
	Server (deployed)		Server (cmdb_ci_server)
Information Layer	Database		Database (cmdb_ci_database)

Use case 1

Applications
Software technologies



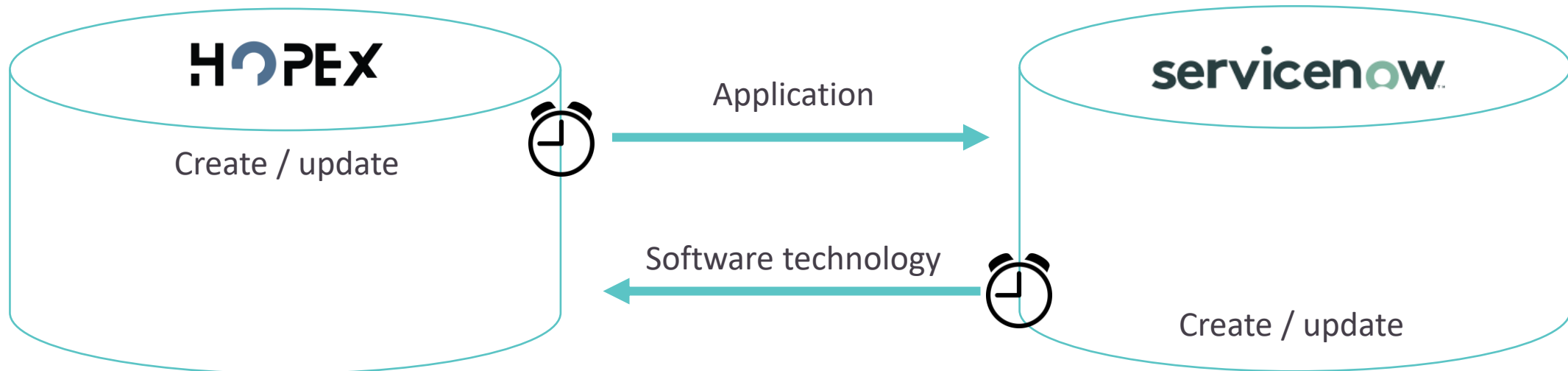
Use case 1 : Application & Technology alignment

HOPEX

- HOPEX is the master repository for **Application**.

Service Now

- Service Now is the master repository for **Software Technologies**.



The integration does not DELETE repository elements; we recommend renaming “_TO_DELETE”



Start Demo

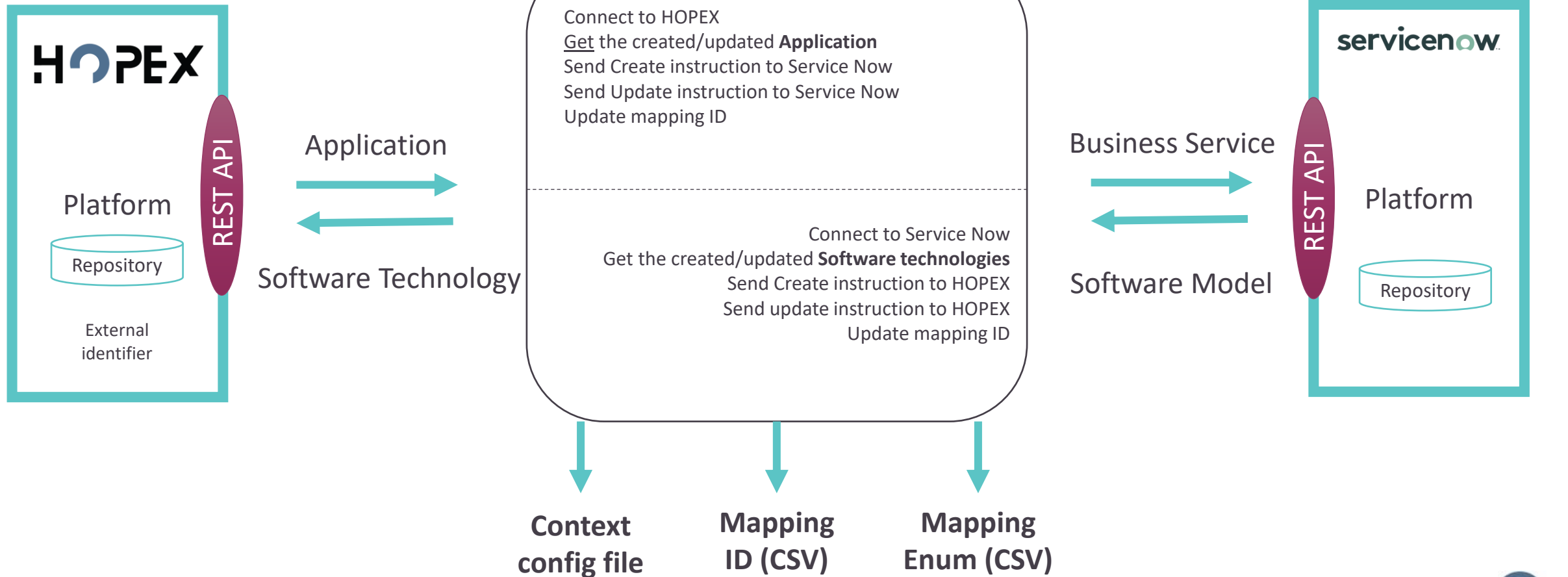


Agenda

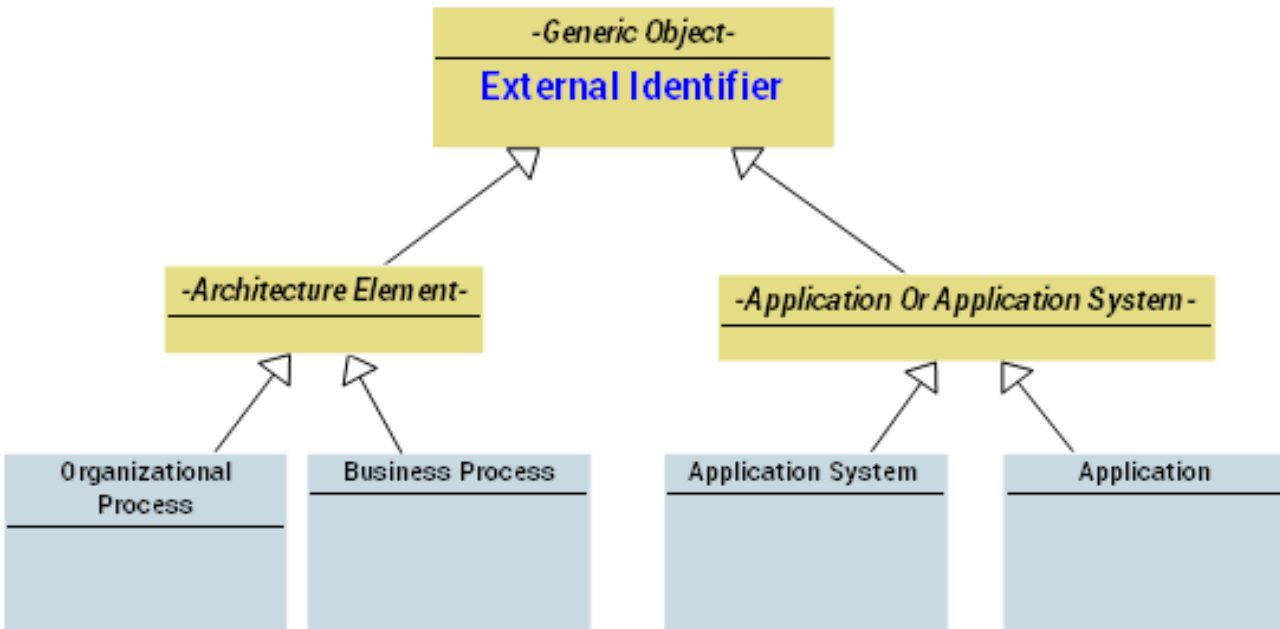
- What use cases are covered by the integration?
- **How does the integration work?**
- How can you customize it?
- When will it be available?

Executable synchronization tool

Executable program



Mapping ID



- From V3 CP1, a new **MetaAttribute** allows to store ID from external systems.
 - **External identifier**
- This new ID is used to store the IDs coming from **Service Now**

Example for : Application

HOPEX

Service Now

External identifier

sys_id



Local name	Cost Contribution Key
Accounting	16%
Billing	16%
Case Management	16%

Lose formatting

Business rules (1/2)

- Objects are found by their ID
 - If IDs are missing objects with the same name are considered equals
- An “Enum mapping” allows to match dropdown values from both systems
- Service Now sys_id are stored both on a CSV Mapping file and in HOPEX
- A log file track
 - Numbers of created, updated
 - Errors

Business rules (2/2)

- The First Time

- The sync tool will read **all** the application and software technologies

- On daily basis

- The sync tool will get only the newly created/update elements.
 - ✓ Modification Date : HOPEX
 - ✓ Update Date : Service Now

- On demand

- The sync tool need to take the “ID” of the object to sync

How the sync tool is launched?



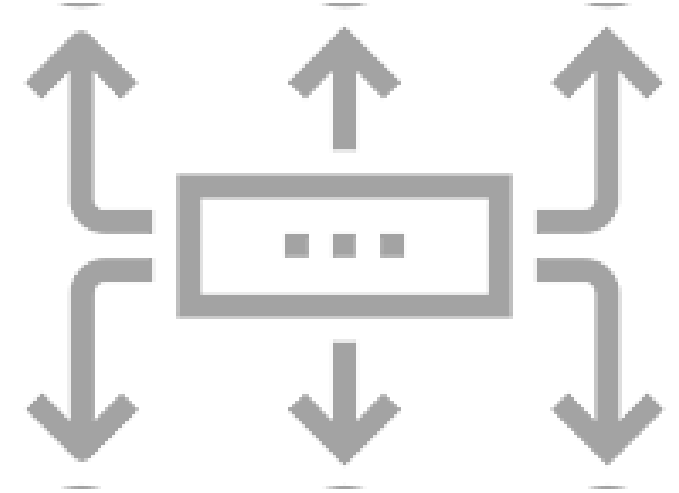
Batch Job

- A batch can be run daily at night to extract the information and update each system accordingly



Web service

- A change in HOPEX trigger the sync tool to update Service Now by REST API
- A change in Service Now trigger the sync tool that call HOPEX REST API



Service Bus

- An independent system organize information exchange.

Future consideration

How to deploy the sync tool ?



HOPEX Server

- For Batch
- For Event trigger by HOPEX



Service Now server

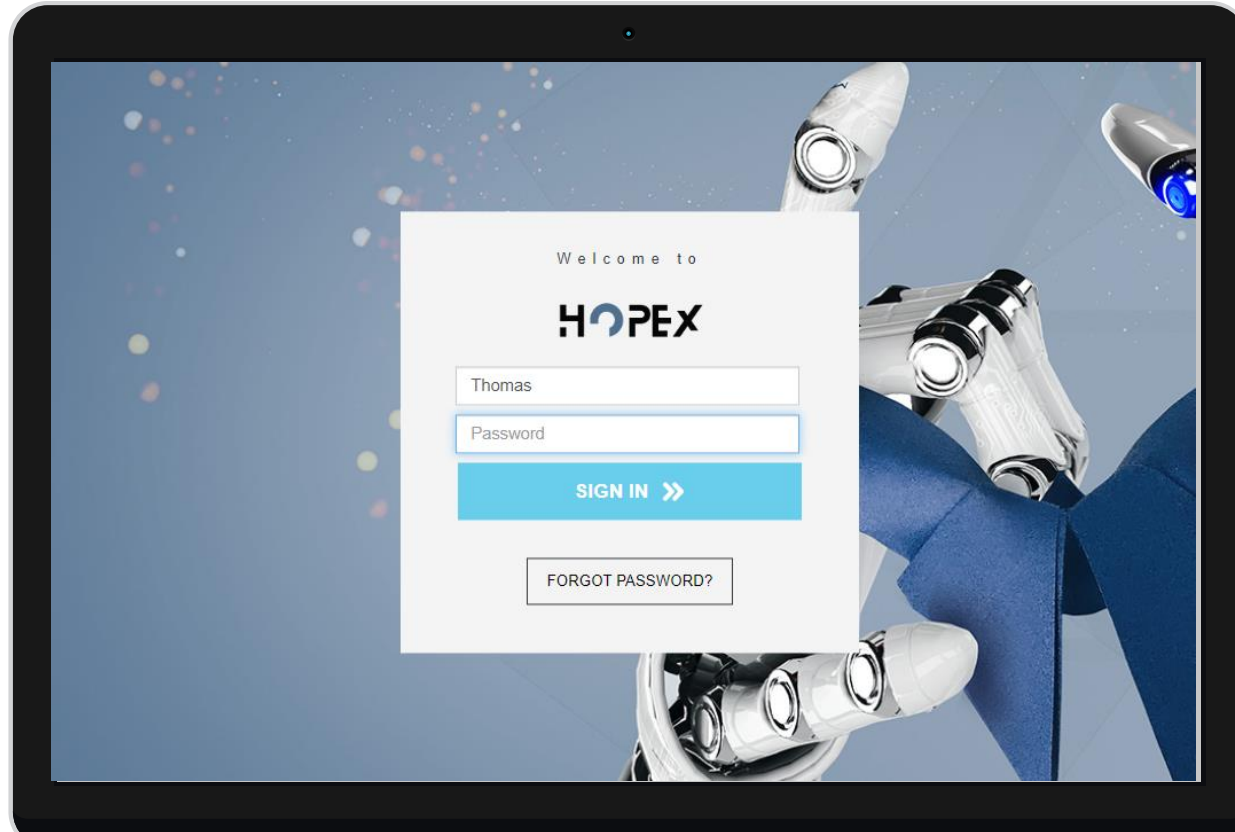
- For Batch
- For event trigger by Service Now



Third party server

- For Batch
- For ESB

Do I need specific license to run the sync tool ?



- You need to have the license for the solution you want to sync
 - Ex. : ITPM ...
- **No additional HOPEX fees**

How do you install it ?



Download

- A ready to use build version of the sync tool is available
- You need Java 8 or above to execute



Configure

- Configure setting
 - Credentials
 - Mapping files



Execute

- Create the batch jobs
 - In windows
 - In CtrlM
 - in any batch tool
- Launch manually

Exchanging data with other systems

- For each Integration item of the catalog you need to answer the following question

Local recopy of data vs. Live data request	One Shot exchange vs. Regular exchange	Bulk/Mass data vs. Incremental/unitary data
Batch trigger vs. Event/Request trigger	Differed data feed vs. Immediate data feed	System embedded script vs. System external script
Data from a file format vs. Data from API	Mapping of concept (Master/Slave)	Business rules of the lifecycles

Mapping of concept (Master/Slave)

- An Excel file contains the list of MetaClass and MetaAttribute from both systems.

Solution	Absolute Identifier	Metaclass Name	API Name	Condition/limit	sample data	Layer	Master repository	Table	Label	Display name
ITPM	IcfsZhjW9T90	Business Capability	BusinessCapability			1 - Business	HOPEX	cmdb_ci_business_capability	Business Capability	CMDB CI Business
ITPM	5tUiX9B5iCT0	Site	Site			1 - Business	Snow	cmn_location	Location	Cmn Location
ITPM	QrUIM9B5iCN0	Org-Unit (external)	OrgUnit	External Entity Type: Vendor		1 - Business		core_company	Company	Core Company
ITPM	QrUIM9B5iCN0	Org-Unit (internal)	OrgUnit	Internal Entity Type: Structure		1 - Business		cmn_department	Department	Cmn Department
ITPM	T20000000s10	Person system	PersonSystem			1 - Business		sys_user	User	Sys User
ITPM	irUio9B5iCO0	Business Function	BusinessFunction	ou org-unit		1 - Business	HOPEX	business_unit	Business Unit	Business Unit
ITPM	pj)grmQ9pG90	Business Process	BusinessProcess			1 - Business	HOPEX	cmdb_ci_business_process	Business Process	CMDB CI Business
Architecture	M(Bj3KxTODME 4X6E1ZpaOjLP	Business Service Catalog Technical Catalog				1 - Business	Snow	sc_catalog	Catalog	Sc Catalog
ITPM		***				1 - Business	Snow	sys_metadata	Application File	Sys Metadata
ITPM	MrUIM9B5iyM0	Application Application	Application			2 - Application	HOPEX	cmdb_ci_service	Business Service	CMDB CI Service
ITPM	OfLsvq1kOPNI	Software Technology Stack	SoftwareTechnologyStack	? Not sure of th		2 - Application	Snow	cmdb_ci_business_app	Business Application	CMDB CI Business
ITPM	OfLsvq1kOPNI	Software Technology	SoftwareTechnology			2 - Application	Snow	cmdb_model_category	Model Category	CMDB Model Cate
ITPM		***				3 - Infrastructure	Snow	cmdb_software_product_model	Software Model	CMDB Software Pr
ITPM	dXqsNtTBHnW1	Server (deployed)	ServerDeployed			3 - Infrastructure	SnowSnow	cmdb_hardware_product_model	Hardware Model	CMDB Hardware Pr
Architecture	vQe2EsWzODI7	IT Server	ITServer					cmdb_ci_server	Server	
Architecture	ySngQjwpiWd0	Database	Database			4 - Information	Snow	cmdb_ci_database	Database	CMDB CI Database
		Lifecycle ?				2 - Application	Snow	cmdb_software_product_model	Software Model	CMDB Software Pr
								cmdb_hardware_product_model	Hardware Model	CMDB Hardware Pr
GRC	iKxTxodsHTpP	Incident	Incident		?	2 - Application	Snow	cmdb_ci_database	Database	CMDB CI Database
								sam_sw_model_lifecycle	Software Model Lifecq	Sam Sw Model Lif
								pc_vendor_cat_item	Vendor Catalog Item	Pc Vendor Cat Item
								Incident	Incident	Incident
						All		cmdb_rel_ci	CI Relationship	



Start Demo



Which use case is ready out of the box ?

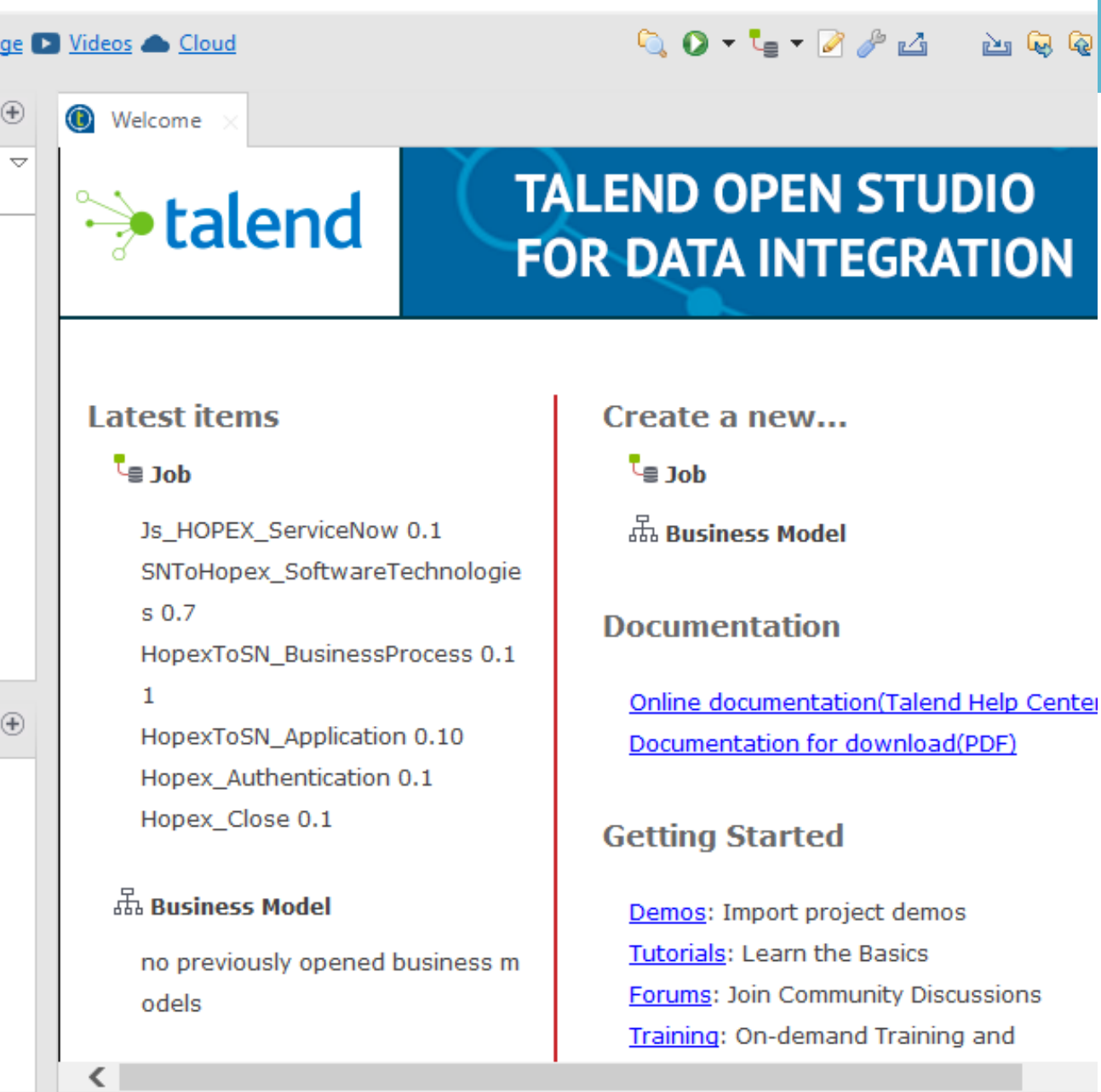


- **Use Case 1 :**

- Application
- Software Technology
- Business Processes

Agenda

- What use cases are covered by the integration?
- How does the integration work?
- **How can you customize it?**
- When will it be available?



Talend Open Studio

- ETL Open Studio 7.1 or above
 - It's a free open source software

[Download here](#)

Talend propose additional services (ESB, Big Data) that we don't need

- Download the HOPEX Service Now integration package

[Download here](#)

HOPEX Service Now integration package

- After download, you get a folder “integration” with inside :

Service Now

- **EXE** : a compiled version ready to use
- **SRC** : the Talend source project
- **CONF** : contains credentials, folder location, enum mapping
- **OUTPUT** : all the Mapping ID CSV or files generated by the sync tool
- **TEMP** : any temporary files needed by the sync tool
- **LOG** : all the logs generated by the sync tool

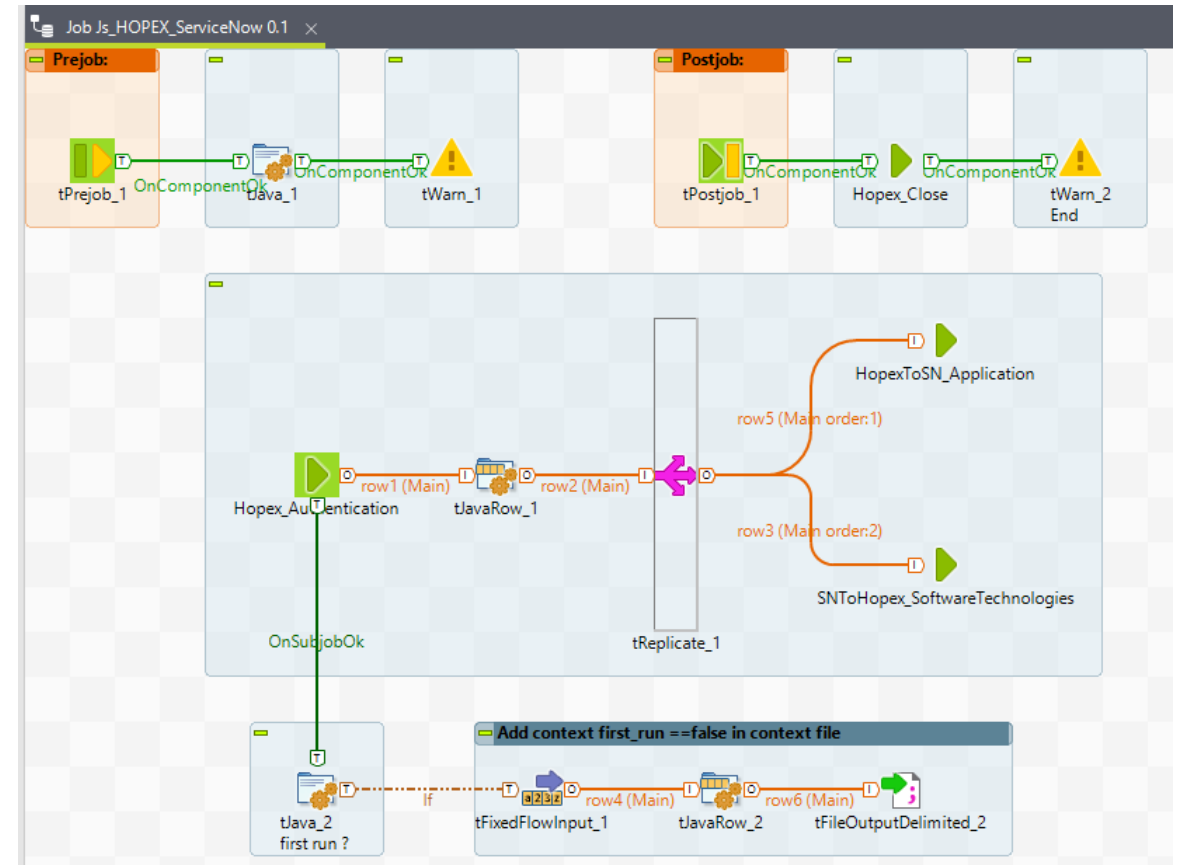
Talend

Job / Component

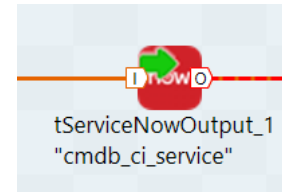
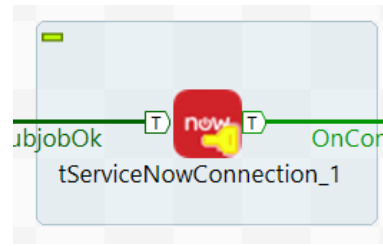


Job definitions

- Talend is a graphical design tools, of one or more components connected together, that allows you to set up and run dataflow management processes. A **Job** Design translates business needs into code, routines and programs, in other words it technically implements your data flow.



Component



- A component is a functional piece that performs a single operation. For example, **tServiceNowConnection**, **tServiceNowInput**.
- Graphically, a component is an icon that you can drag and drop from the **Palette** to the workspace.

- Service Now
 - tServiceNowConnection
 - tServiceNowInput
 - tServiceNowOutput
- HOPEX
 - tREST
 - tJSON
 - tJAVA

Talend

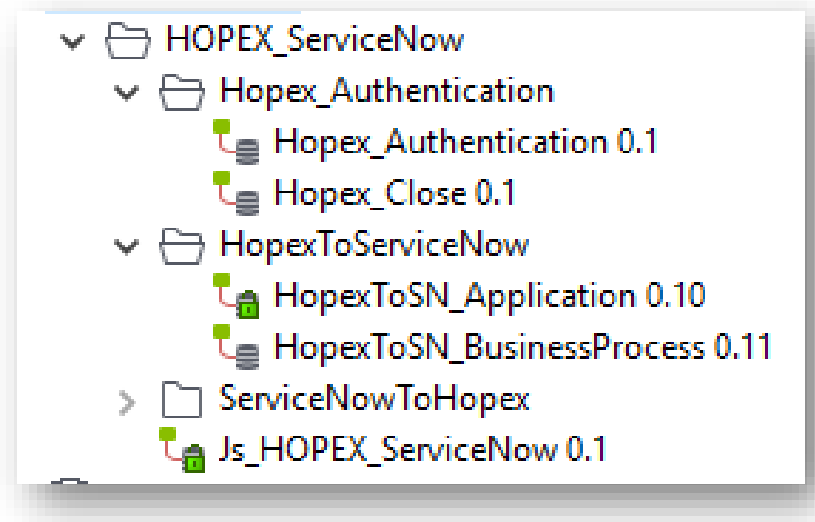
Customization



How the JOB are structured ?

● Package

- HOPEX Service Now
 - ✓ Is the orchestrator of all the jobs
- HOPEX Authentication
 - ✓ Is the job to manage the authentication to HOPEX
- HOPEX To ServiceNow
 - ✓ Are the jobs to send information from HOPEX to Service Now
- ServiceNow To HOPEX
 - ✓ Are the jobs to send information from Service Now to HOPEX

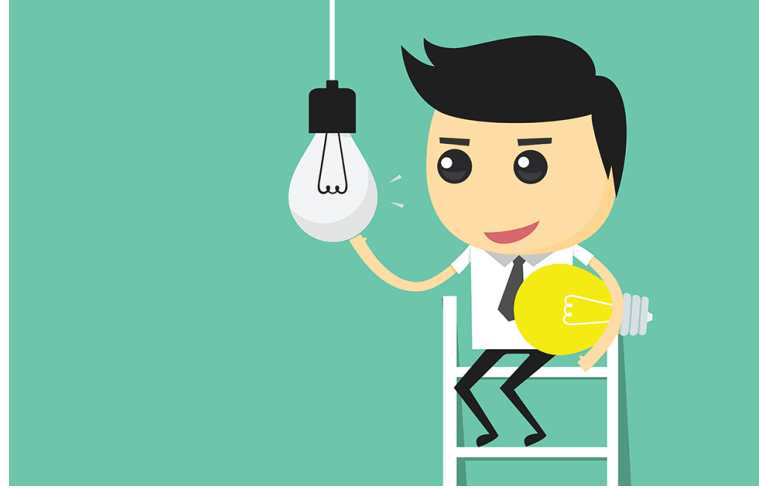


What can be customized ?



Orchestration

- You can select which Jobs you want to execute.



Update Jobs

- You can change the jobs about a MetaClass or MetaAssociation

For instance :

- The target MetaClass/Table is different
- You want to sync other MetaAttribute/Column



Create New Jobs

- You can create new integration between MetaClass/Tables or create new relationship

Skills needed to customized



- Talend Job

- Understanding of the logic and philosophy of Talend ETL

- Eclipse / Java

- Talend rely on Eclipse and Java. An understanding of this environment will help.

GraphQL REST API

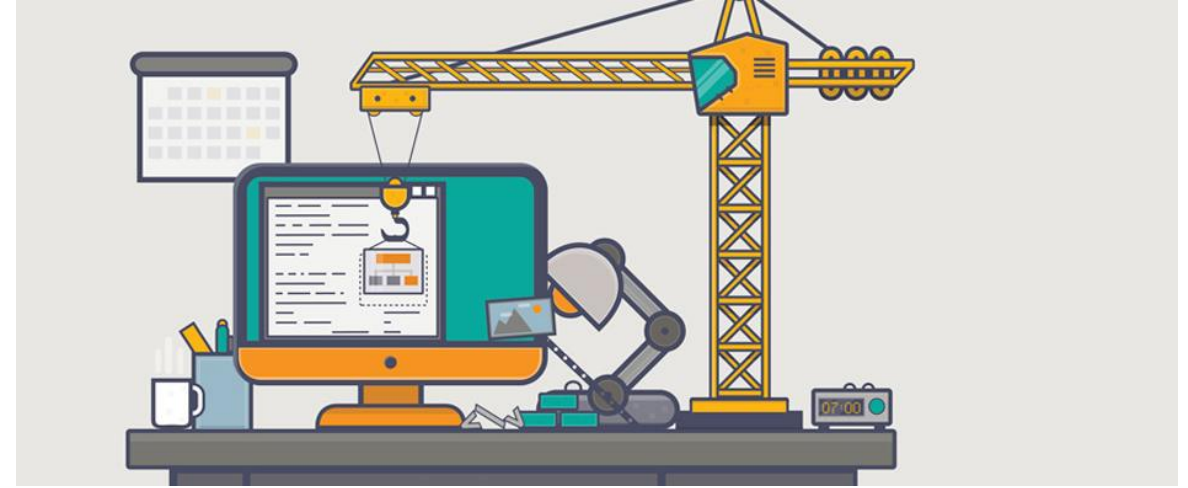
How-to video



Job Duplication

- This how-to video show you the step to perform to duplicate an existing job

<https://youtu.be/khjdaE0F98k>



Build the Job

- This how-to video show you the step to perform to build an executable sync tool

<https://youtu.be/k-IBV9dhzMs>



Start Demo



FAQ



Frequently asked questions

- **What is ready out of the box ?**
 - A sync tool to send application, software technology and business process
- **Is the integration can be configured or customized ? Yes**
- **Which version of HOPEX or Service Now ?**
 - HOPEX V3 CP3
 - Service Now : any that expose REST API
- **What are the prerequisite on Service Now side ?**
 - The REST API need to be visible for read/write
 - In case of a MID server their need to be a relay for the REST API call
- **Is there any user interface in HOPEX to configure the integration ? No**
- **Which metaclass/tables are concerned ?**
 - A mapping list of the metamodel is available. Out of the box only three are mapped
- **Does the integration is full or partial ?**
 - At first sync this is a full recopy of data
 - Daily only modified objects are sync
- **Where is the process for integration is executed ?**
 - On any server of your choice : HOPEX, service Now or a third-party server.
- **What is the frequency of alignment ?**
 - This is a batch, by default we recommend daily
- **What are the technical API prerequisite ?**
 - REST API on Service Now Side
 - REST API based on GraphQL on HOPEX side
- **Is there any license cost ?**
 - No additional cost for the integration itself
 - You need to have sufficient license for Service Now and HOPEX
- **What is the average volume of data exchanged ?**
 - At initial load the full content (Thousands of items)
 - Daily less than ~100 objects
- **What is the cost of the project ?**
 - Depends on the complexity and business rules : number of metaclass/tables to aligned ? Number of MetaAttribute/Columns ? ...
- **Can I have the integration real time ? Yes**
 - The REST API can be called when a change occur in HOPEX or in Service Now. Therefore it requires much work of configuration on Service Now and HOPEX.

mega

