Building, Integrating and Consuming Intelligent Applications using ISLM

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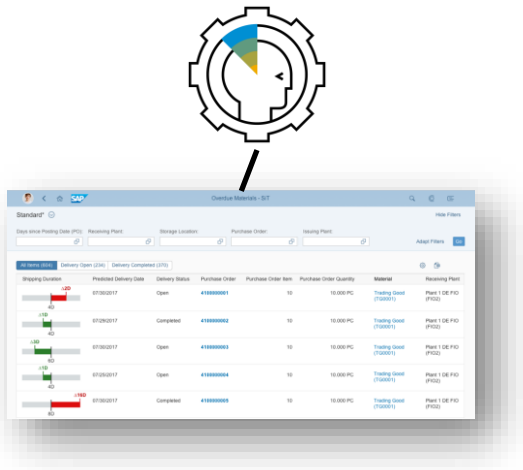
Intelligent business applications: Initial adoption & ML Ops

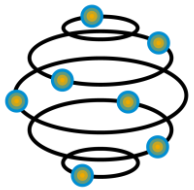
How can I get started with SAP delivered ML scenarios?

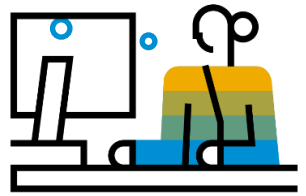
How can I trigger, control, and monitor the model training?

Does my system meet prerequisites to run SAP delivered intelligent scenarios?

How can I have a better control over productive usage?







Train, monitor, set active . . .

Business Administrator

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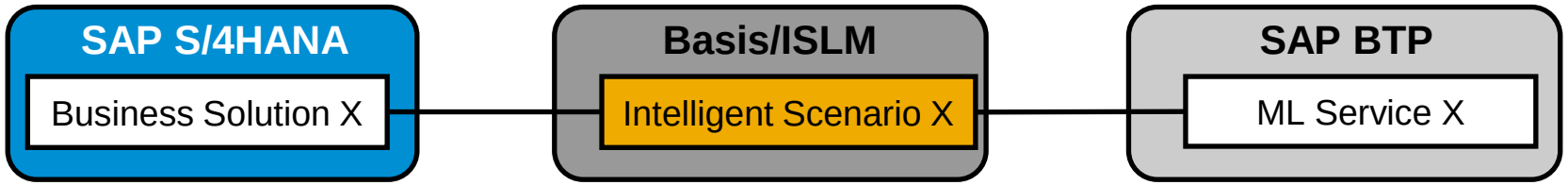
Motivation: Integrate and operate ML in SAP S/4HANA

Enable efficient operation and management of machine learning scenarios in SAP S/4HANA



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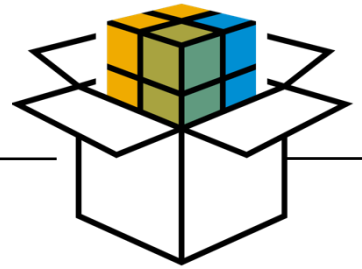
Goal: Build a harmonized solution for both worlds



Standardized consumption and operation of machine learning scenarios for both flavors

Embedded scenario:
Machine learning provider (such as APL and PAL for SAP HANA) runs in the same stack as the business application (SAP S/4HANA).

Side-by-side scenario:
Machine learning provider runs in a different stack (for example SAP BTP) than the business application (SAP S/4HANA).

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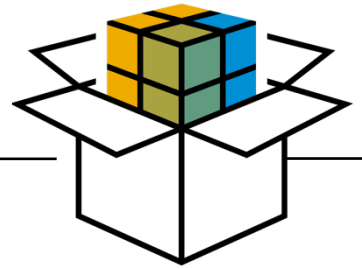
Scope: Same solution for shipped and custom developed scenarios



Standardized consumption and operation of machine learning scenarios for both flavors

SAP delivered scenarios (preconfigured):
SAP S/4HANA scenarios in ISLM (sales order automation, behavioral insights, asset management, and the like)

Custom developed scenarios:
Predictive scenarios based on ML in SAP HANA (APL or PAL); ML scenarios based on BTP

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ML operations with and without ISLM

Without ISLM

Additional efforts and cost to deliver the ML use case

Added complexity with usage of multiple tools across different stacks

Cumbersome change management during productive usage

Additional complexity to handle inference consumption

With ISLM

Leverage **harmonized and standardized** operational experience with ISLM

Central cockpit to operate and manage **within SAP S/4HANA stack**

Control about productive usage with an additional step “**activate**”.

Simplified inference consumption by **ABAP APIs** or **CDS views** for side-by-side & embedded flavors respectively

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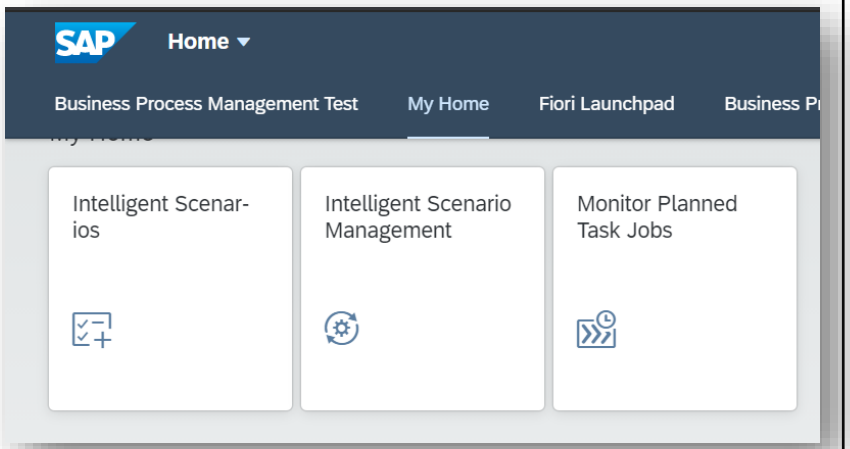
ISLM: Standardized integration of AI in SAP S/4HANA with ISLM

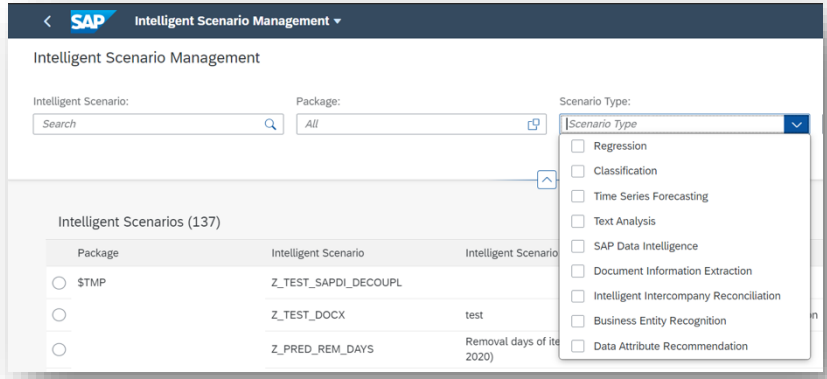
What is ISLM?

- Single-entry point within SAP S/4HANA stack to efficiently integrate and operate ML scenarios.
- Standardized framework delivered in SAP BASIS. ISLM is part of standard SAP S/4HANA license .
- Focus on customer managed use cases (custom developed & SAP delivered).
- ISLM is the Successor of SAP Predictive Analytics integrator



Key benefits:

- Simplified integration of ML capabilities into business applications with minimal coding
- ISLM enables end-to-end lifecycle operations in the context of the business application right from exploration, prerequisite checks, training and activation .
- Supports auditing requirements and simplifies the change management via explicit activation of models.



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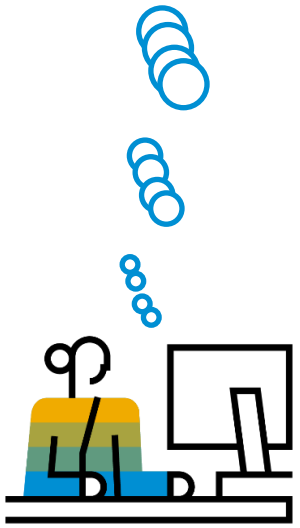
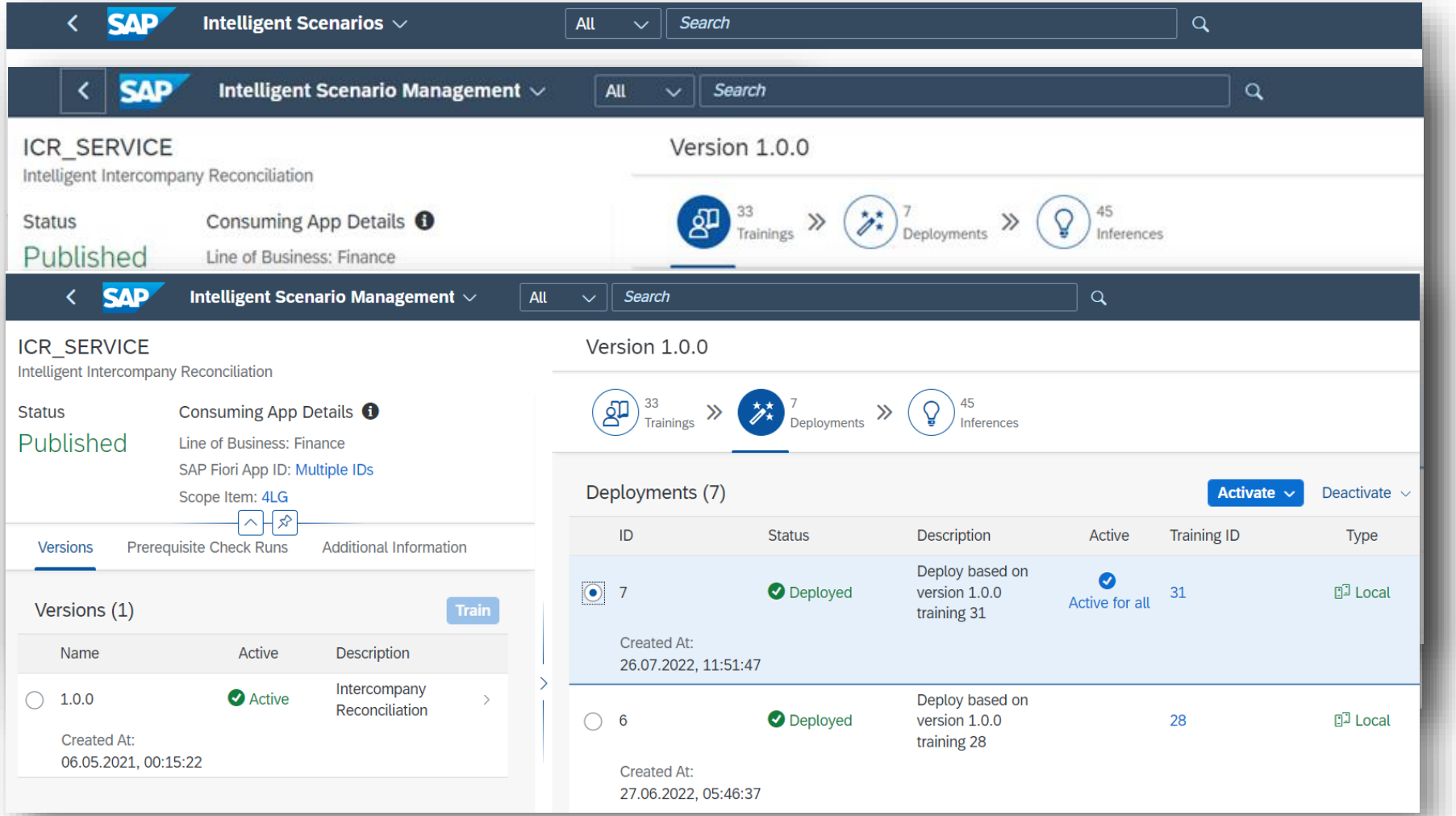
Initial adoption & ML Ops powered by Intelligent Scenario Lifecycle Management

How can I have a better control over productive usage?



Business Administrator



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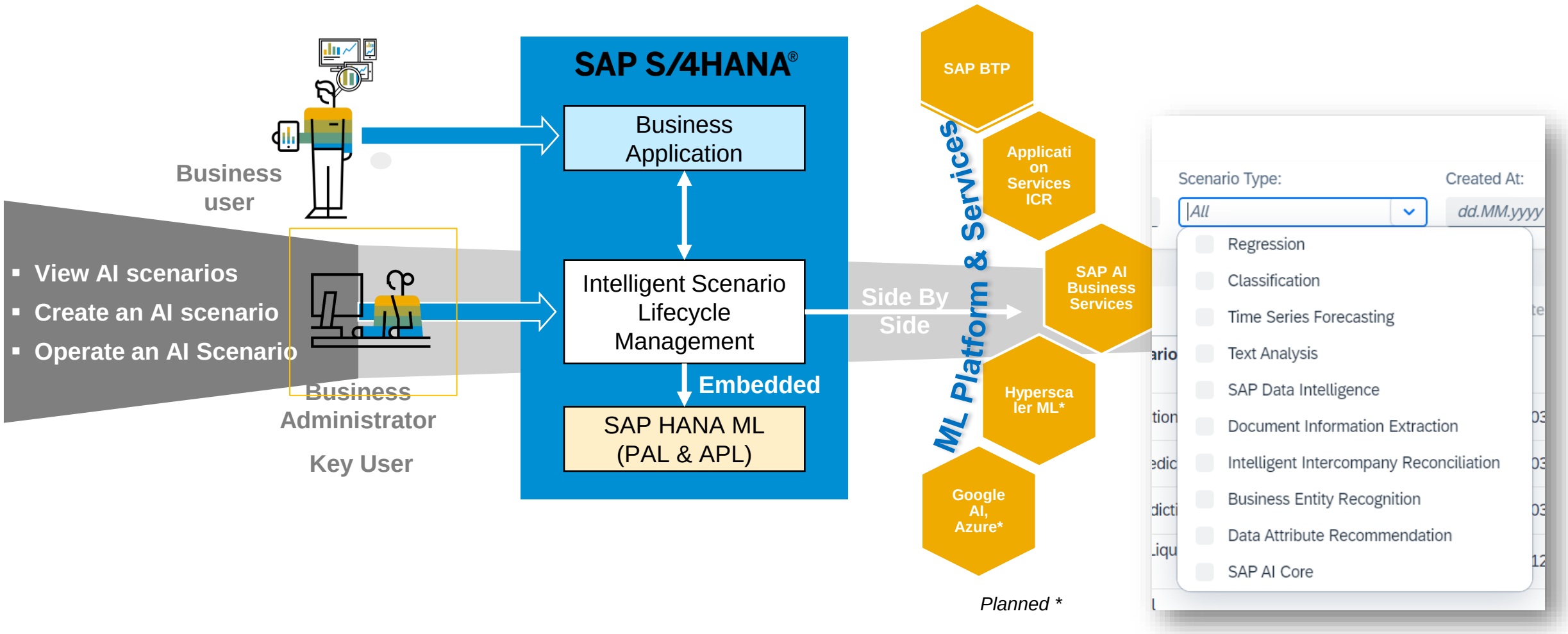
ISLM: Standardized integration of AI in SAP S/4HANA

Lab Preview



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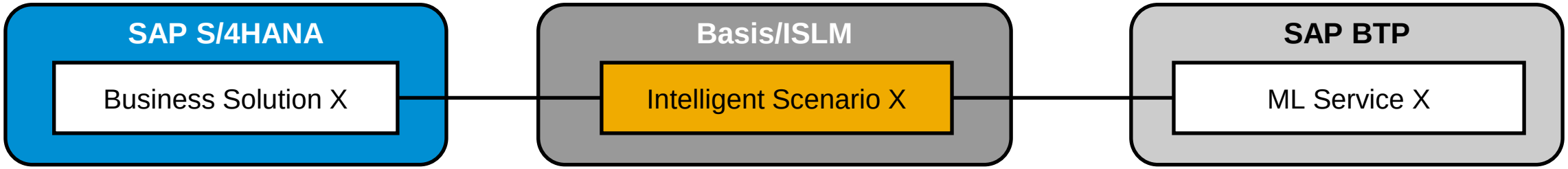
Standardized integration of AI in SAP S/4HANA

Intelligent scenario – the binding entity



- ISLM introduces a new entity called intelligent scenario per use case.
- Intelligent scenarios are based on one intelligent scenario type where the behavior is defined.
- For SAP S/4HANA shipped scenarios, intelligent scenarios are ABAP objects in your package shipped together with your solution.
- An intelligent scenario binds the business application to its consuming ML service such as in SAP BTP.
- ISLM provides customers control over productive usage with an additional step “activate”. This step enables to specify the appropriate trained model to be used in the consuming application.

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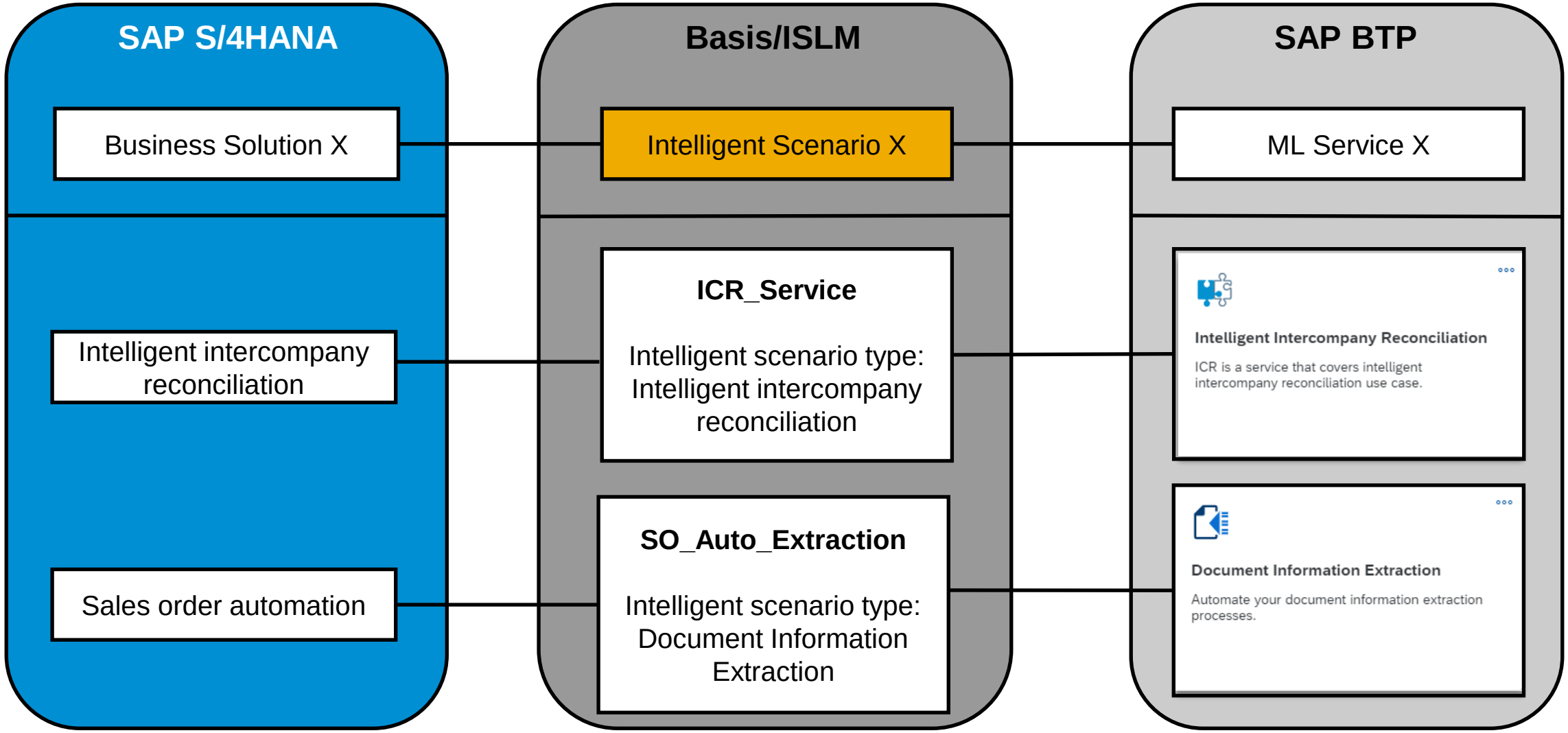
Examples of intelligent scenarios released with SAP S/4HANA



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Out-of-the box Intelligent Scenarios

Intelligent Scenarios (7)

Package	Intelligent Scenario	Line of Business	Status	Intelligent Scenario Description	Scenario Type
BEI_ML	BEI_LATE_FILING	Service	Published	Late Filing Prediction	Classification
	BEI_LATE_PAYMENT	Service	Published	Late Payment Prediction	Classification
	BEI_RECEIVERSHIP	Service	Published	Receivership Prediction	Classification
FIN_ICA_MATCH	ICR_SERVICE	Finance	Published	Intelligent Intercompany Reconciliation	Intelligent Intercompany Reconciliation
EAM_ML_ORDER_DAMAGE_CODE	PREDICTDAMAGECODE	Asset Management	Published	Prediction of Damage Code and Code Group for Maintenance Orders (Based on Maintenance Notifications)	Classification
	PREDICTMAINTOBJPART	Asset Management	Published	Object part prediction in the area of EAM associated to a malfunction in a technical object	Classification
RAP_SD_SLS_AUTOEXTRN	SO_AUTO_EXTRACTION	Sales	Published	Intelligent Scenario of Automatic Extraction for Sales Order Creation	Document Information Extraction

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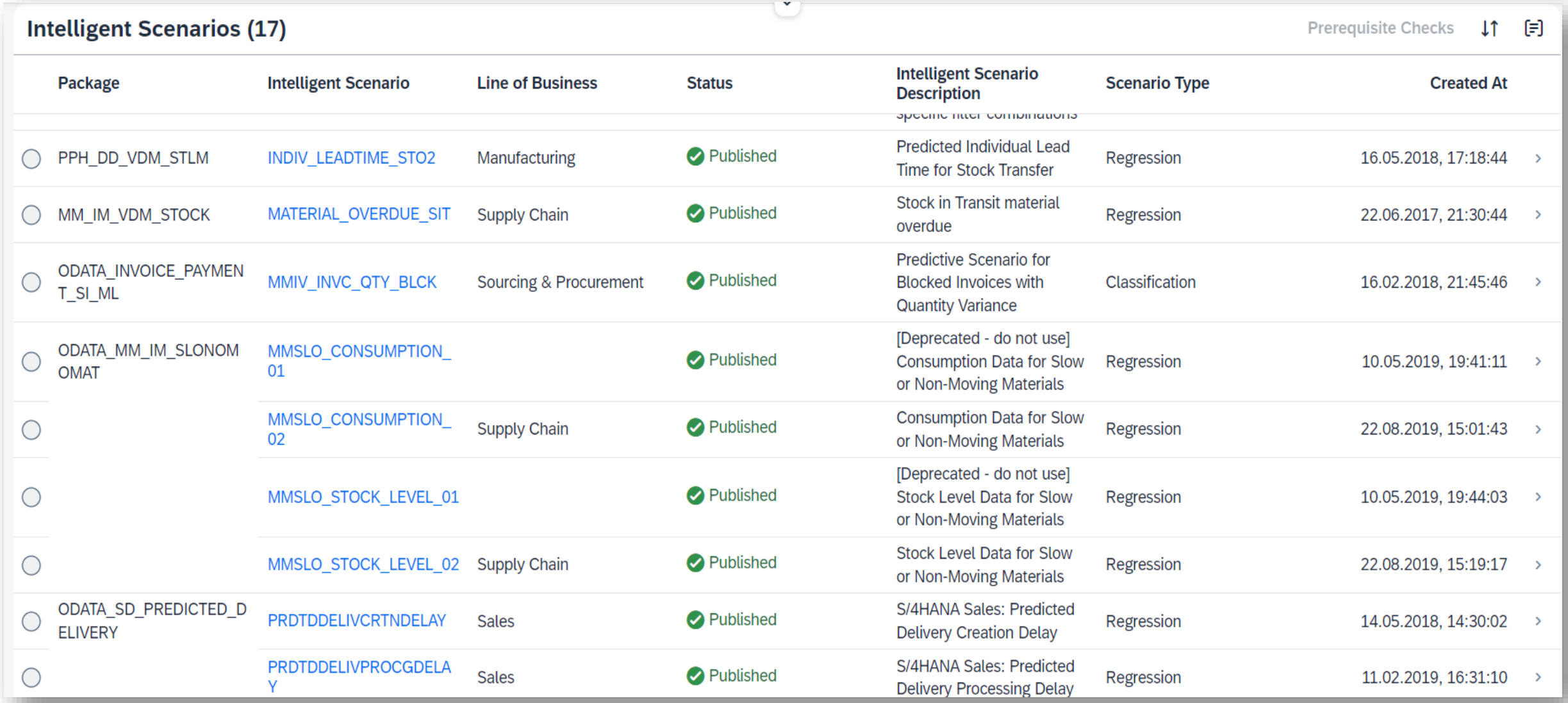
Out-of-the box Intelligent Scenarios



Intelligent Scenarios (17)

Prerequisite Checks

Package	Intelligent Scenario	Line of Business	Status	Intelligent Scenario Description	Scenario Type	Created At
PPH_DD_VDM_STLM	INDIV_LEADTIME_STO2	Manufacturing	Published	Predicted Individual Lead Time for Stock Transfer	Regression	16.05.2018, 17:18:44
MM_IM_VDM_STOCK	MATERIAL_OVERDUE_SIT	Supply Chain	Published	Stock in Transit material overdue	Regression	22.06.2017, 21:30:44
ODATA_INVOICE_PAYMENT_SI_ML	MMIV_INVC_QTY_BLCK	Sourcing & Procurement	Published	Predictive Scenario for Blocked Invoices with Quantity Variance	Classification	16.02.2018, 21:45:46
ODATA_MM_IM_SLONOMOMAT	MMSLO_CONSUMPTION_01		Published	[Deprecated - do not use] Consumption Data for Slow or Non-Moving Materials	Regression	10.05.2019, 19:41:11
	MMSLO_CONSUMPTION_02	Supply Chain	Published	Consumption Data for Slow or Non-Moving Materials	Regression	22.08.2019, 15:01:43
	MMSLO_STOCK_LEVEL_01		Published	[Deprecated - do not use] Stock Level Data for Slow or Non-Moving Materials	Regression	10.05.2019, 19:44:03
	MMSLO_STOCK_LEVEL_02	Supply Chain	Published	Stock Level Data for Slow or Non-Moving Materials	Regression	22.08.2019, 15:19:17
ODATA_SD_PREDICTED_DELIVERY	PRDTDDELIVCRTNDELAY	Sales	Published	S/4HANA Sales: Predicted Delivery Creation Delay	Regression	14.05.2018, 14:30:02
	PRDTDDELIVPROCGDELAY	Sales	Published	S/4HANA Sales: Predicted Delivery Processing Delay	Regression	11.02.2019, 16:31:10

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ISLM: Delivering and consuming ML scenarios with ISLM

- Identify the ML technology & algorithm
- Create Intelligent scenario in ISLM as a binding entity
- Publish/deliver intelligent scenario

- Explore SAP delivered intelligent scenarios
- Identify relevant scenarios e.g. LOB specific, check additional information related to consuming business application
- Check Readiness requirements for an intelligent scenario on a given SAP S/4HANA system

- For SAP BTP service based scenarios, create service instance and service key in SAP BTP
- Maintain connection for the intelligent scenario to connect it to SAP BTP service instance using ISLM

- Train ML model with customer data
- Analyze quality of trained ML model.
- Deploy & Activate to specify which trained model to use in business application
- SAP S/4HANA model consumption in business scenario

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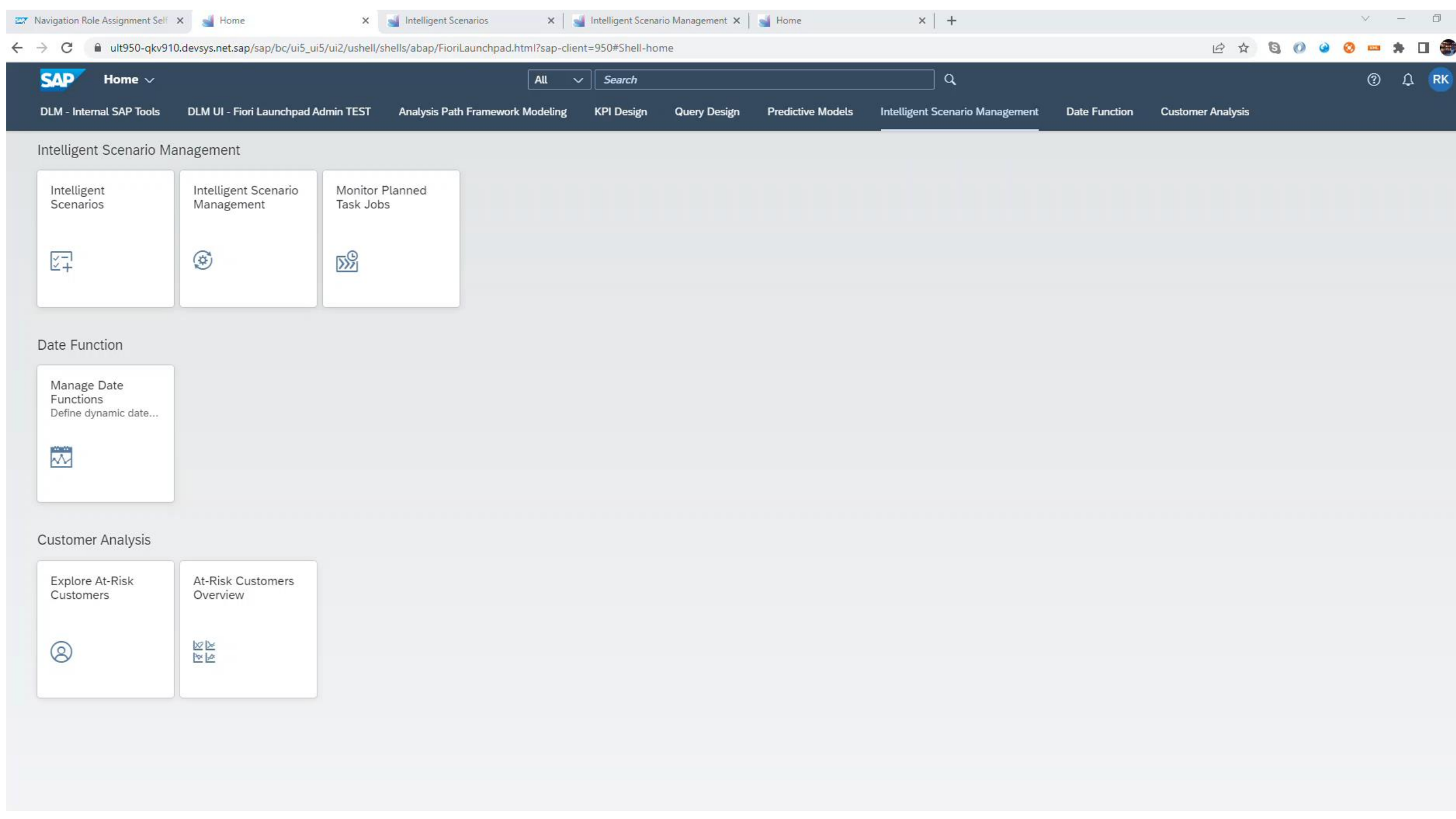
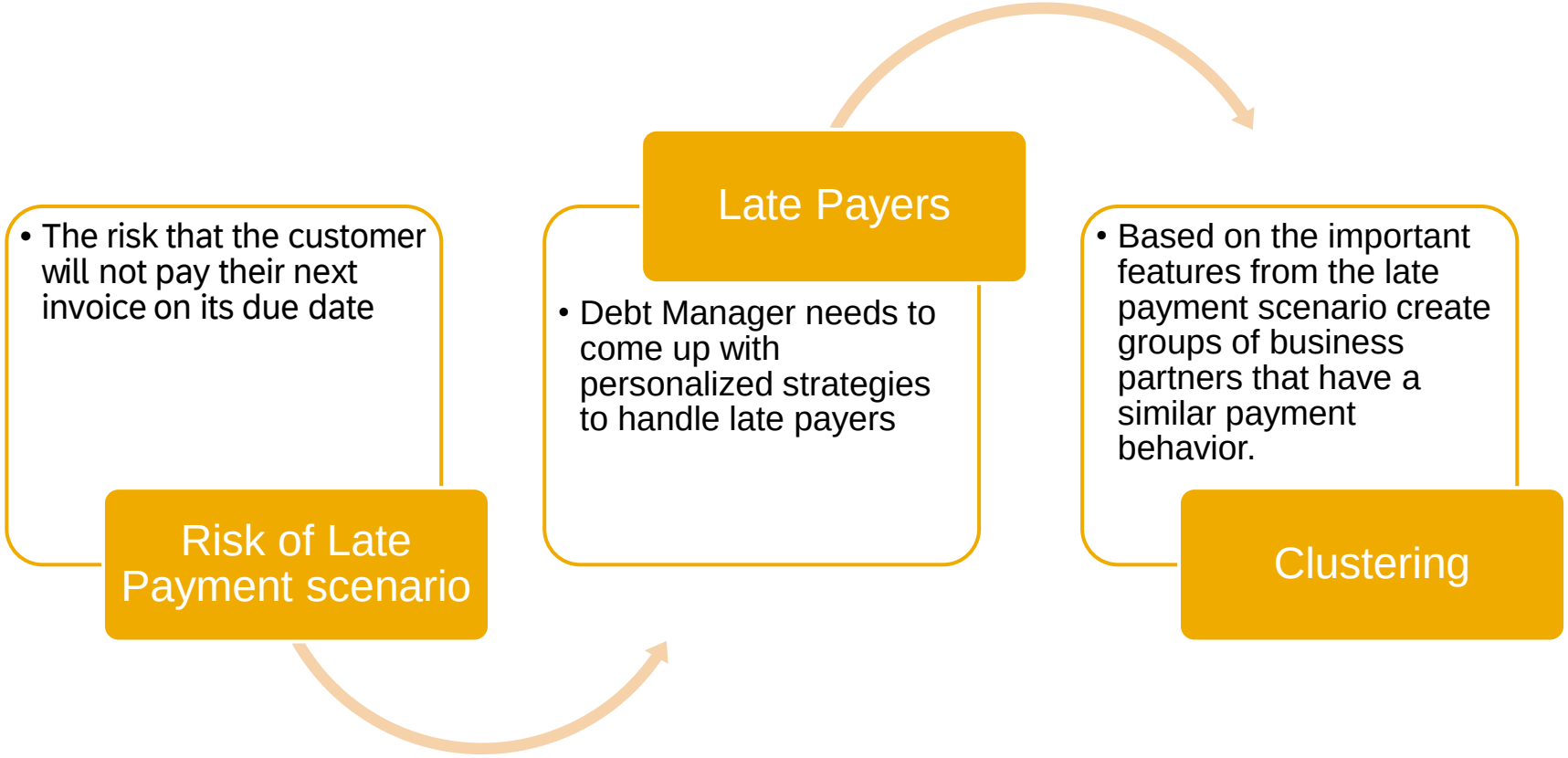

Navigation Role Assignment Self
Home
Intelligent Scenarios
Intelligent Scenario Management
Home
ult950-qkv910.devsys.net.sap/sap/bc/ui5_ui5/ui2/ushell/shells/abap/FioriLaunchpad.html?sap-client=950#Shell-home
Home
All
Search
RK
DLM - Internal SAP Tools
DLM UI - Fiori Launchpad Admin TEST
Analysis Path Framework Modeling
KPI Design
Query Design
Predictive Models
Intelligent Scenario Management
Date Function
Customer Analysis
Intelligent Scenario Management
Intelligent Scenarios
Intelligent Scenario Management
Monitor Planned Task Jobs
Date Function
Manage Date Functions
Define dynamic date...
Customer Analysis
Explore At-Risk Customers
At-Risk Customers Overview

Risk of Late Payment and Clustering



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Summary: Further Information

Intelligent scenario lifecycle management

Further information

SAP Help links (latest releases)

- SAP S/4HANA 2021 FPS01
- SAP S/4HANA Cloud 2202

Web session replays

- SAP Community Webinar
- SAP TechEd 2022 Session Replay
- SAP TechEd 2022 Session Replay

SAP Community blogs and podcast series

- ISLM – SAP Community Topic Page
- ISLM Frequently Asked Questions
- Resources and journey to machine learning with SAP S/4HANA: Blog series
- Podcast: Enhancements to the Intelligent Scenario Lifecycle Management aka ISLM

SAP Road Map Explorer

SAP Road Map Explorer: Search for “Machine Learning Scenario Management

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Thank You.

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