



bonteam

Stable Java development agile team since 2020

Preview of developed product

Agenda

1. The Team
2. Technology and Tools
3. App UI
4. Application Architecture Design
5. Analysis
6. Project Management
7. Contact Details

Team

Full-time

- 1x Project Manager/Domain Architect
- 1x Analyst (Business and Tech)
- 2x Java BE Developer
- 1x Java Fullstack Developer

Expertise On-demand / Ad-hoc

- Azure Devops
- Azure Infrastructure
- Database
- QA Automation

Technology and Tools

Backend

Java
MS Azure
Springboot
Java Message Service (JMS)
PostgreSQL, OracleSQL
Hibernate ORM
Swagger
JUnit
GIT

Frontend

React, Bootstrap
HTML5, CSS3, Typescript

Architecture, analysis, project management

Enterprise Architect, Balsamic Wireframes, UML,
BPMN, ArchiMate 3.0
Atlassian JIRA, MS Project Professional 2019

Preview of the application

SKODA ŠKODA GROUP Z.O. Dashboard **Receival** Release Administration Warehouse Operations Overview Foreign Parts Dealer

Auto a.s. 30

Type an ID and press Enter.

RETURN RELEASE REJECT

Undelivered parts: 14

Damaged part	Invoice no.	Claim sheet no.	Part no.	Part name	Quantity	Days for delivery
100383328400	60210006	348902 01	5E7945097	VYSOKO POSAZENA BRZDOVA SVETLA	1	22
100383328500	60210006	348902 01	5E7971171A	KABELOVY SVAZEK ADAPTACNI	1	22
100383328700	60210007	348923 01	5WA035282	RIDICI JEDNOTKA PRO	1	22
100383328800	60210007	349004 01	04L907282E	RIDICI JEDNOTKA ZHAVICI SVICKY	1	22
100383328900	60210007	349004 02	5Q0407183L	LUZKO GUMA-KOV	2	22
100383328600	60210006	349019 01	5WA407621A	NABOJ KOLA S LOZISKEM	1	22
100383912500	60210009	348593 01	5E3052133E	SADA LED-OSVETNASTUP.PROSTORU	1	29
100383912600	60210009	348593 01	5E3867365A SAP	TESNENI DVERI VNITRNI	1	29
100383912000	60210008	348949 01	05L115389AE	CISTIC OLEJE S PRIRUBOU	1	29
100383912100	60210008	348975 01	8Y0837239A GRU	KRYTKA PRO KLIKU DVERI	1	29
100383912200	60210008	348975 01	8Y0959121	MADLO DVERIVNEJSI SE SENZOREM	1	29
100383912300	60210008	348975 02	5JA827249D	Doraz klinovy	2	29
100383912400	60210008	349050 02	5WA035284A	RIDICI JEDNOTKA PRO	1	29
100383912700	60210009	349062 01	5E1713123AKDYT	RUKOJET RADICI PAKY (KUZE)	1	29

Received parts: 1

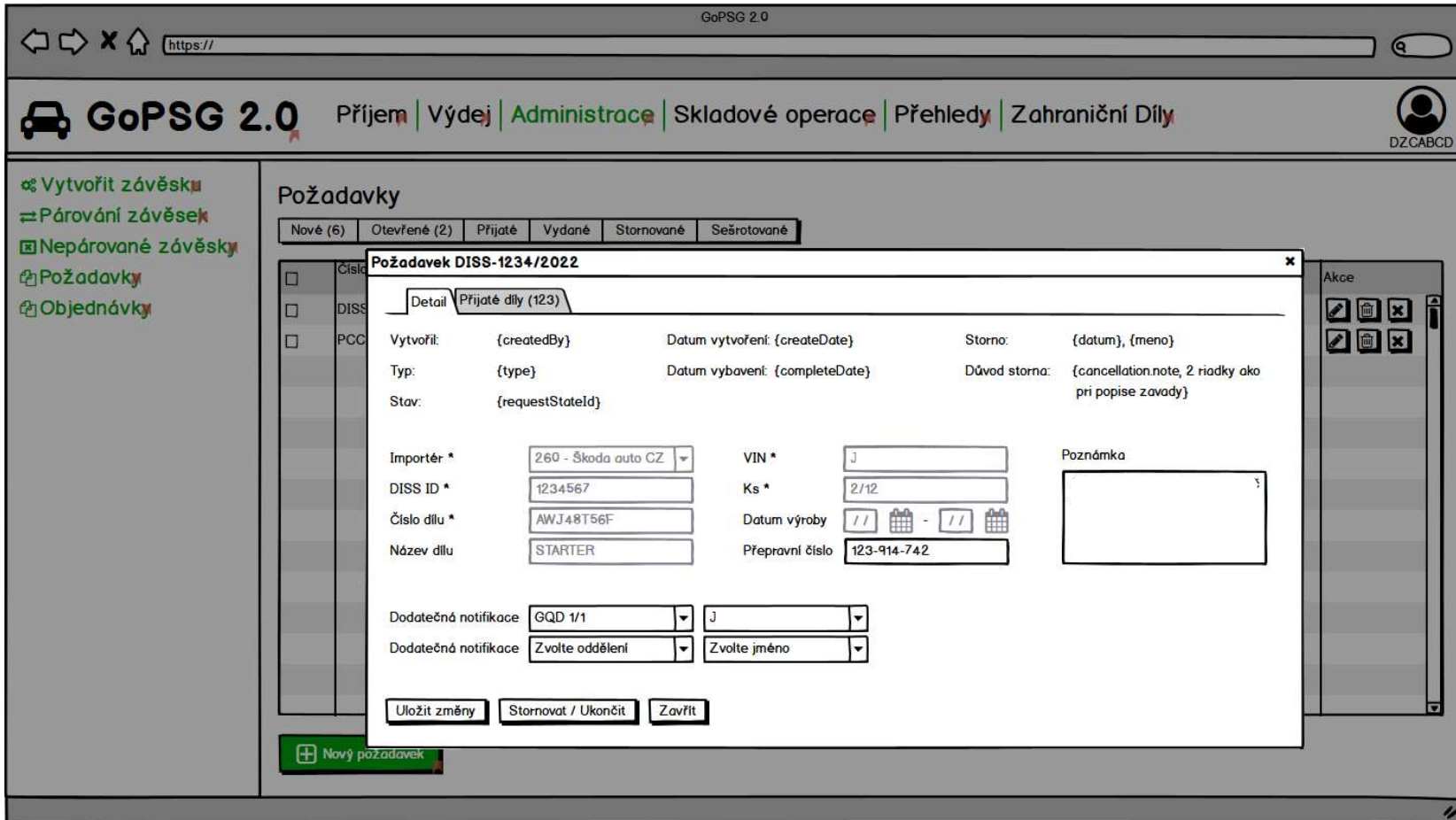
Damaged part	Invoice no.	Claim sheet no.	Part no.	Part name	Release	Quantity	Actions
100383912800	60210009	349103 01	658827851B	SERVOMOTOR PRO PATE DVERE		1	< > X

CONFIRM AND SEND VIA EMAIL CANCEL



bonteam

But at first, this is a wireframe presented to the customer before actual development begins...



...and then it's done

SKODA GoPSG 2.0 Dashboard Reveal Release Administration Warehouse Operations Overview **Foreign Parts** Dealer

Create damaged part
 Damaged part pairing
 Parts exempted from pairing
 Requests

Requests

New (363) Receiving parts (9) Parts Received (150) Canceled Scrapped

Request number	Status	Parts received	Creation date	Importer	DISS ID	PCC ID	Part number	Part name	Failure code	Production	Actions
<input type="checkbox"/> PCC-0064/2023	New	0	2023-02-24	Německo - 107		DEU_5789	10A035284	OCU JEDNOTKA			

REQUEST DISS-0232/2023

Detail Received parts

Created by	Type	Status	Creation date	Completion date
V	DISS	New	2023-02-23	

Importer: VIN:
 DISS ID: Quantity:
 Part number: Manufacture date: --
 Part name: Transport number:

Requester:
 Additional notification:
 Additional notification:

<input type="checkbox"/> DISS-0226/2023	New	0	2023-02-22	POLSKO - 456	0158524894			Spojkový válec pracovní			
<input type="checkbox"/> PCC-0057/2023	New	0	2023-02-21	NORSKO - 218		NOR_396	8V0862159A	NASTAVOVACI ZARIZENI			
<input type="checkbox"/> DISS-0225/2023	New	0	2023-02-21	Německo - 107	0157966431		654959752G AIF	KLIC HLAVNI			

Customizable display of the attributes

SKODA
Dashboard
Receive
Release
Administration
Warehouse Operations
Overview
Foreign Parts
Dealer

Filter: Invoice date (From): 2023-02-01 X Invoice date (To): 2023-02-26 X Dealer: A C X

Damaged part: Invoice no.:
 Part no.: Claim sheet no.:
 VIN: DISS inquiry:

State:
 Date: From To
 Stored parts only:


+ Advanced filters
 APPLY CLEAR FILTERS


Number of parts: 21







Damaged part	Part name	Part no.	Claim sheet no.	Invoice date	Warranty	Failure code	DISS inquiry	Manufacture date	Sale date	Repair date	Storage	Receival date	Note	Actions
<input type="checkbox"/>	100383218500	SKLO ZRCATKA (SFERICKE)	6VA857522B	639028 01	2023-02-13	7-10	M4 66N1	2021-09-21	2021-09-24	2023-02-06				<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input checked="" type="checkbox"/>	100383218400	SKLO ZRCATKA (SFERICKE)	6VA857521B	639028 01	2023-02-13	7-10	M4 66N1	2021-09-21	2021-09-24	2023-02-06				<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input checked="" type="checkbox"/>	100383218300	TYC SPOJOVACI	5Q0411315B	638263 03	2023-02-13	1-10	17D 4078	2020-12-18	2021-01-27	2023-02-06				<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input checked="" type="checkbox"/>	100383218200	NABOJ KOLA S LOZISKEM	5WA501611	638263 02	2023-02-13	1-10	17D 4267	2020-12-18	2021-01-27	2023-02-06				<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	100383218100	Volant multifunkcni (kuze)	5E3419093CDVKJ	634845 01	2023-02-13	1-10	1QD 9162	2021-10-20	2021-11-19	2023-02-03				<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	100383218000	NABOJ KOLA S LOZISKEM	5WA407621A	638479 01	2023-02-13	1-10	145 4067	2022-05-24	2022-07-12	2023-01-26				<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	100383217900	TESNENI	04L131547S	638199 01	2023-02-13	2-10	1Z1 No 1Z3335	2643	0157762352	2011-03-11	2011-03-18	2023-01-31		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	100383217800	TESNENI	03L145757Q	638199 01	2023-02-13	2-10	1Z1 No 1Z3335	2643	0157762352	2011-03-11	2011-03-18	2023-01-31		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	100383217700	TESNENI	03L131547N	638199 01	2023-02-13	2-10	1Z1 No 1Z3335	2643	0157762352	2011-03-11	2011-03-18	2023-01-31		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	100383217600	CHLADIC PRO ZPETNE VEDENI	03L131512DQ	638199 01	2023-02-13	2-10	1Z1 No 1Z3335	2643	0157762352	2011-03-11	2011-03-18	2023-01-31		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	100382627800	CIDLO CASTIC	04L906261J	638127 01	2023-02-06	2-10	36 No NS762Z	2381	157773873	2019-11-26	2020-01-15	2023-02-02	2023-02-10	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	100382627700	CIDLO CASTIC	05L906261B	638100 02	2023-02-06	1-10	14 Yes NS743Z	2693	0157680340	2022-05-03	2022-06-13	2023-02-02	P2 18 2023-02-10	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	100382627600	KLIC HLAVNI	3V0959752N AIF	638100 01	2023-02-06	1-10	14 No NS743Z	5708	*****	2022-05-03	2022-06-13	2023-02-02	P1 02 2023-02-10	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	100382627500	RUKOJET RADICI PAKY (KUZE)	3V1713123K DYT	638175 01	2023-02-06	1-AG	69 No 3V3RVZ	3404	158115040	2020-01-27	2020-02-07	2023-01-27	2023-02-10	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	100382627400	JEDNOTKA POHONNA	57A827851D	637878 02	2023-02-06	1-AG	84 No NU745Y	5513	*****	2018-04-03	2018-04-06	2023-01-18	2023-02-10	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

EXPORT TO EXCEL PRINT

Preview of the application – detailed record


Dashboard **Receive** Release Administration Warehouse Operations **Overview** Foreign Parts Dealer

 P

-  Parts overview
-  Receipts
-  Contacts overview
-  Storages overview
-  Last damaged part movement cancellation
-  Damaged part cancellation

Parts overview

Filter Invoice date (From): 2023-02-01 X Invoice date (To): 2023-02-26 X Dealer: [dropdown] X

Damaged part	Invoice no.	State
Part no.		
VIN		

+ Advanced filters

APPLY
CLEAR FILTERS

Number of parts: 21

<input type="checkbox"/>	Damaged part	Part name
<input type="checkbox"/>	100383218500	SKLO ZRCATKA (SFERICKE)
<input checked="" type="checkbox"/>	100383218400	SKLO ZRCATKA (SFERICKE)
<input type="checkbox"/>	100383218300	TYC SPOJOVACI
<input type="checkbox"/>	100383218200	NABOJ KOLA S LOZISKEM
<input type="checkbox"/>	100383218100	Volent multifunkcni (kuze)
<input type="checkbox"/>	100383218000	NABOJ KOLA S LOZISKEM
<input type="checkbox"/>	100383217900	TESNENI
<input type="checkbox"/>	100383217800	TESNENI
<input type="checkbox"/>	100383217700	TESNENI
<input type="checkbox"/>	100383217600	CHLADIC PRO ZPETNE VEDENI
<input type="checkbox"/>	100382627800	CIDLO CASTIC
<input type="checkbox"/>	100382627700	CIDLO CASTIC
<input type="checkbox"/>	100382627600	KLIC HLAVNI
<input type="checkbox"/>	100382627500	RUKOJET RADICI PAKY (KUZE)
<input type="checkbox"/>	100382627400	JEDNOTKA POHONNA

PART NO. 100383218400

General information
Movements history

Part no.	Part name	Root cause
6VA857521B	SKLO ZRCATKA (SFERICKE)	Yes

Invoice no.	Invoice date	Claim sheet no.	DISS inquiry
4	2023-02-13	639028 01	

GoPSG information

Import date: 2023-02-07

Received date:

Received by:

State: Unprocessed

Rejection reason:

Storage:

Storage date:

Stored by:

Failure description:

Note:

Part information

Model: PJ34M4

Quantity: 1

Price: 1, Kč

Warranty type: 7-10

Failure code: 66N1

Failure type: 0099

Vehicle

VIN: TM

Manufacture date: 2021-09-21

Sale date: 2021-09-24

Repair date: 2023-02-06

Claim date: 2023-02-03

Km: 12

Immobile vehicle: No

Subjects

Importer: (260) Česko

Supplier: (00) Syste...

Dealer: (24) a.s.

Holder: Dealer - (24)

PRINT LABEL
CLOSE

EXPORT TO EXCEL
PRINT

Configurable notifications from admin perspective and dashboards

SKODA GoPSG 2.0 Dashboard Releival Release Administration Warehouse Operations Overview Foreign Parts Dealer

Warning! On 21.2.2023 will be the warranty lab closed between 7am-1pm. Thank you for your understanding.

Importer Dealer Code

Announcements

Spare parts from immobile vehicles (LB)
 In case of immobile vehicles only 10 days are applied for a delivery. If you can not reach us within 10 working days, please send the spare part via nightly deliver as per AS G75C. Edit Delete Hide

Status

4 % of damaged parts do not have prolonged delivery limit

Logistic mistake is not applied

No damaged parts are near delivery limit expiration

1 damaged parts with expired delivery limit

Reservation of parts delivery ✕

Damaged parts All parts

Undelivered (1) Rejected (0) Delivery limit expired (1) LB parts (0) Paintwork warranties (1) Delivered Canceled Billing forced

+ Add column

Damaged part	Days for delivery ↑	Failure description	Part name	Part no.	Claim sheet no.	Invoice date	Invoice no.	Warranty type	Km	LB part	Model	Failure code	DISS inquiry	Manufacture date	Sale date	Repair date	Actions
100353115500	-239		SERVISNI PRIPRAVEK	V03839142AA	000002 01	2022-01-03	1111111	1-60	0	No		Z1SK	*****	2021-11-30	2021-11-30	2022-01-02	

Configurable list of values from user interface - possible state of a damaged part

SKODA GoPSG 2.0 | Dashboard | Receival | Release | Administration | Warehouse Operations | Overview | Foreign Parts | Dealer

Navigation: Contact management, Process settings, Storage management, Damaged part management, Statistics

Reasons for rejecting parts during Receival

+ Add reason

Search

Language	Reason	Description
CZ	Díl je nekompletní	
EN	Part incomplete	
SK	Diel je nekompletný	

State:

SAVE DELETE CANCEL

Part doesn't match information in the commitment	<input checked="" type="checkbox"/>
Part exceedingly dirty	<input checked="" type="checkbox"/>
Fault description missing	<input checked="" type="checkbox"/>
Missing plugs to prevent dirt contamination	<input checked="" type="checkbox"/>
Incorrect request type	<input checked="" type="checkbox"/>
Mechanically / chemically damaged	<input checked="" type="checkbox"/>
Unreadable commitment, PRINT	<input checked="" type="checkbox"/>
Unreadable fault description	<input checked="" type="checkbox"/>
Undelivered part	<input checked="" type="checkbox"/>
AS, TPI or GUARANTEE MANUAL conditions not complied with	<input checked="" type="checkbox"/>
The current copy of the overdraft not documented	<input checked="" type="checkbox"/>
Manufacturer's code does not match	<input checked="" type="checkbox"/>
Unauthorized interference with the part	<input checked="" type="checkbox"/>
Part interchange	<input checked="" type="checkbox"/>
Fault not marked	<input checked="" type="checkbox"/>

Configurable business logic rules – influencing behavior of the application

SKODA GoPSG 2.0

Dashboard Reveal Release **Administration** Warehouse Operations Overview Foreign Parts Dealer

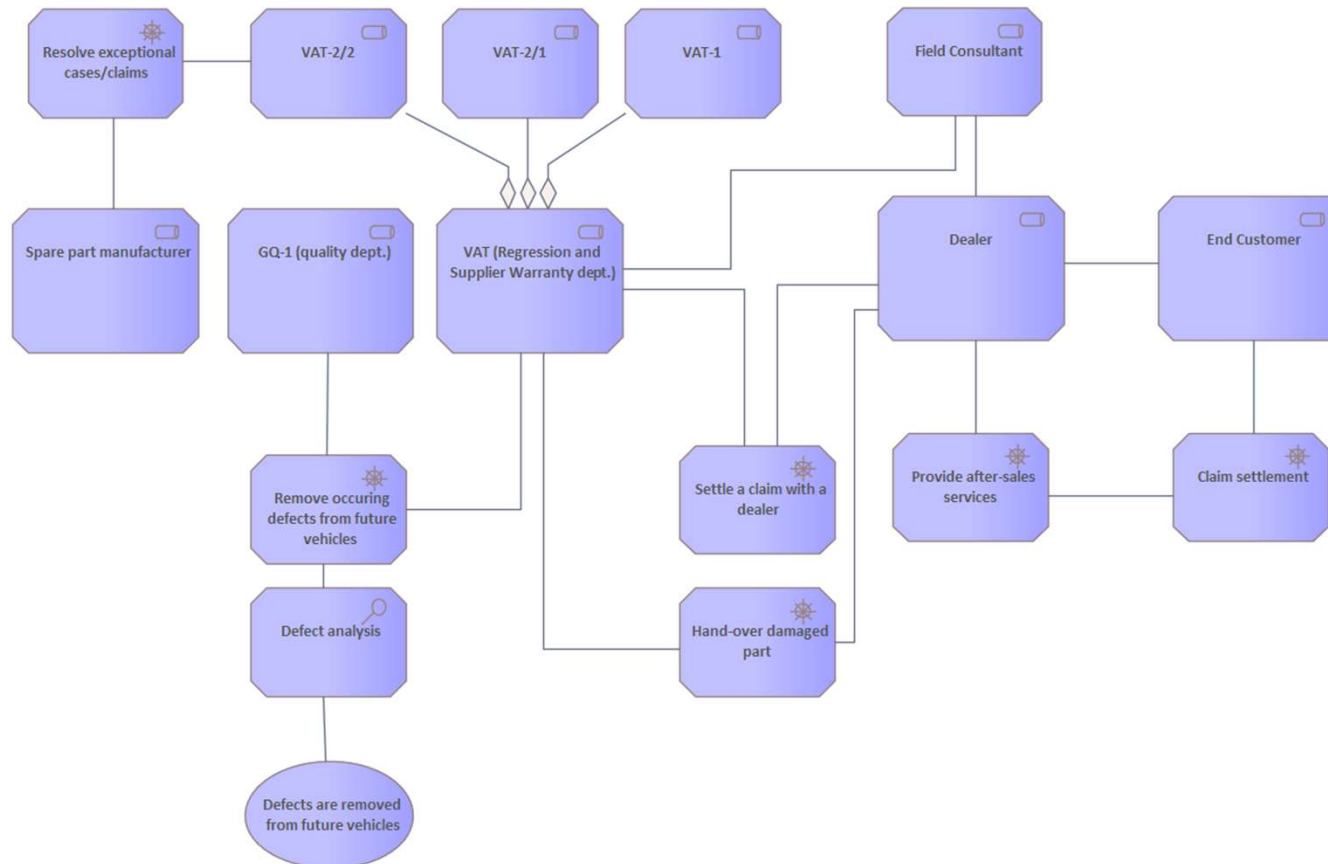
Contact management
Process settings
Storage management
Damaged part management
Statistics

Delivery limits

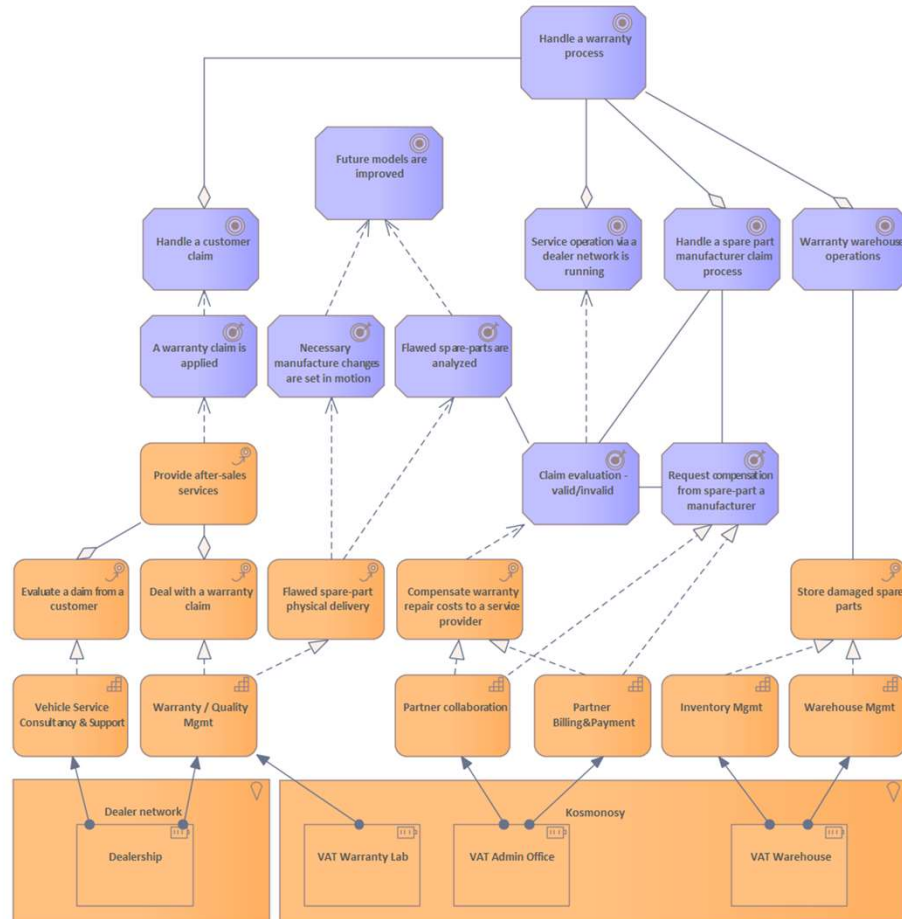
Parts delivery limits settings

Standard limit	<input type="text" value="35"/>	(Valid from 2022-08-03)
Limit for LB parts	<input type="text" value="10"/>	(Valid from 2022-08-03)
Prolonged limit	<input type="text" value="180"/>	(Valid from 2022-08-03)
Limit after rejection	<input type="text" value="30"/>	(Valid from 2022-08-03)
Limit prolongation	<input type="text" value="10"/>	(Valid from 2022-08-03)

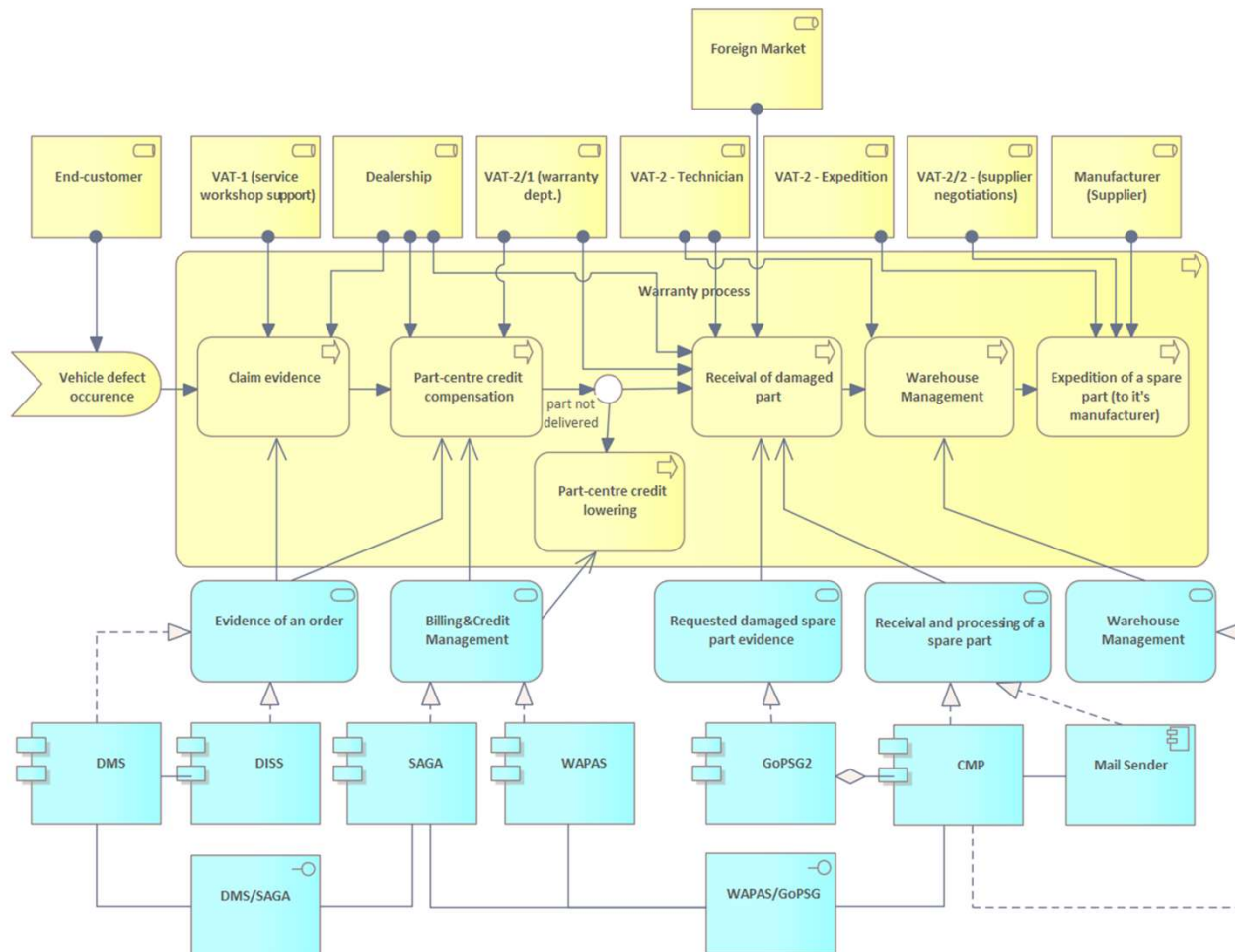
Mapping of involved parties and their motivation – stakeholder map



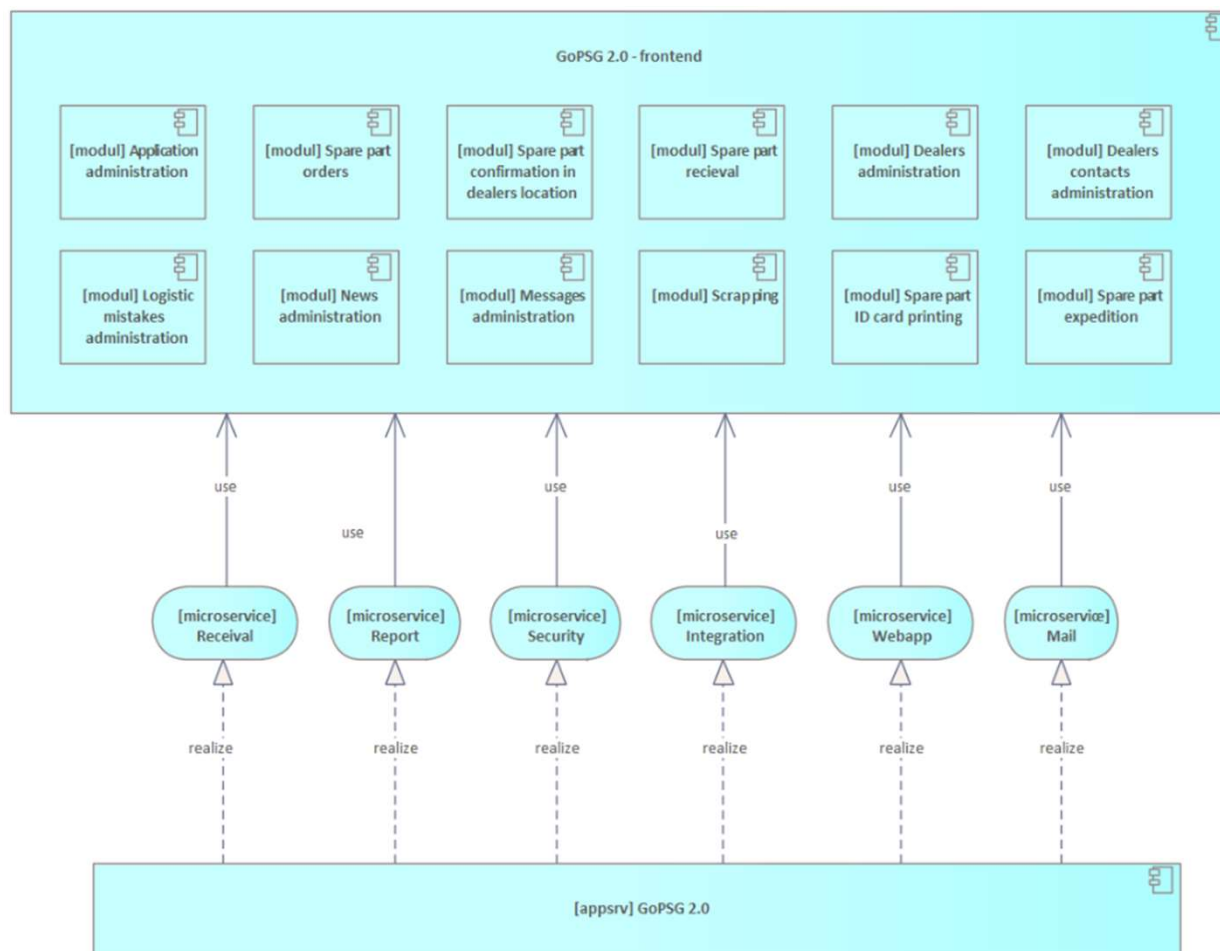
Mapping of the project goals with regard to company capabilities and premises



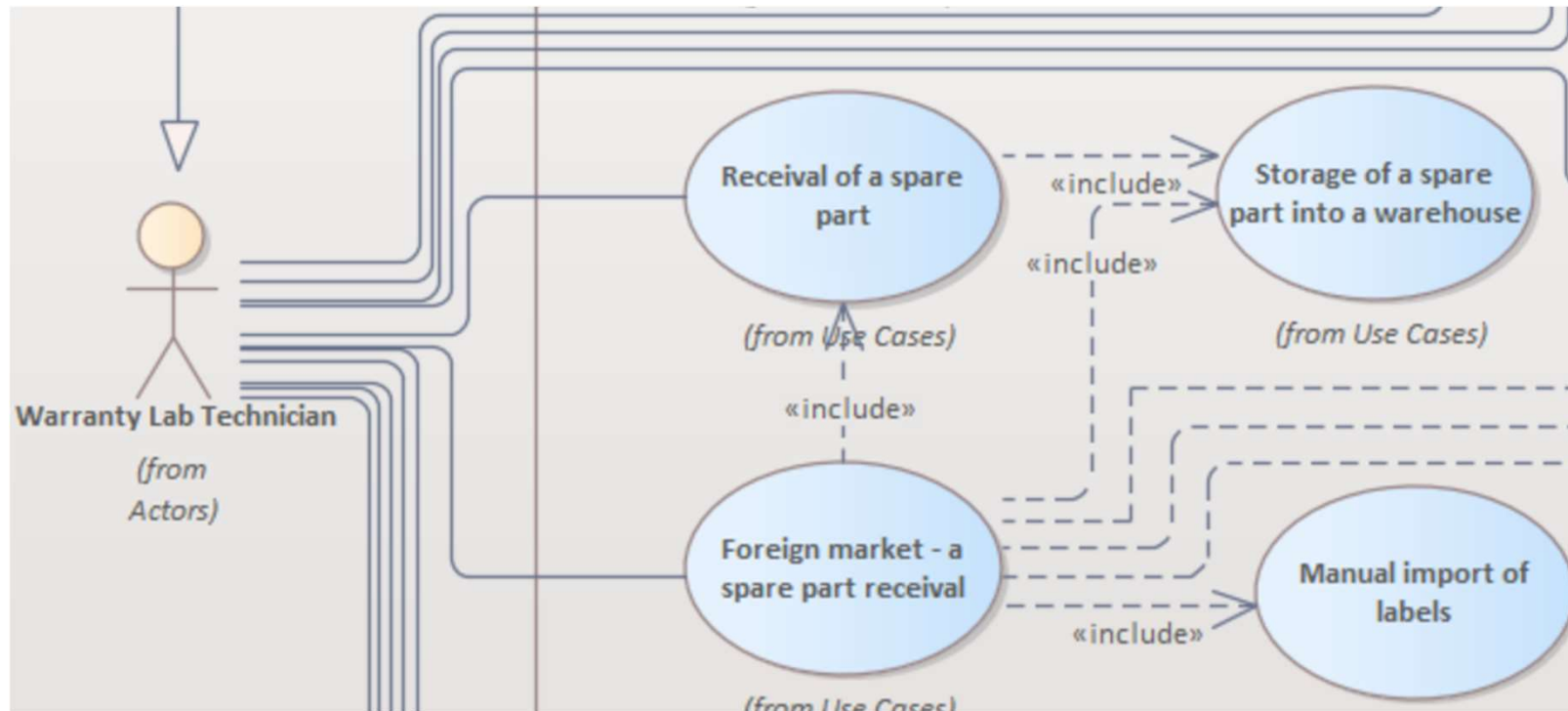
Business architecture – processes, participating business roles and applications



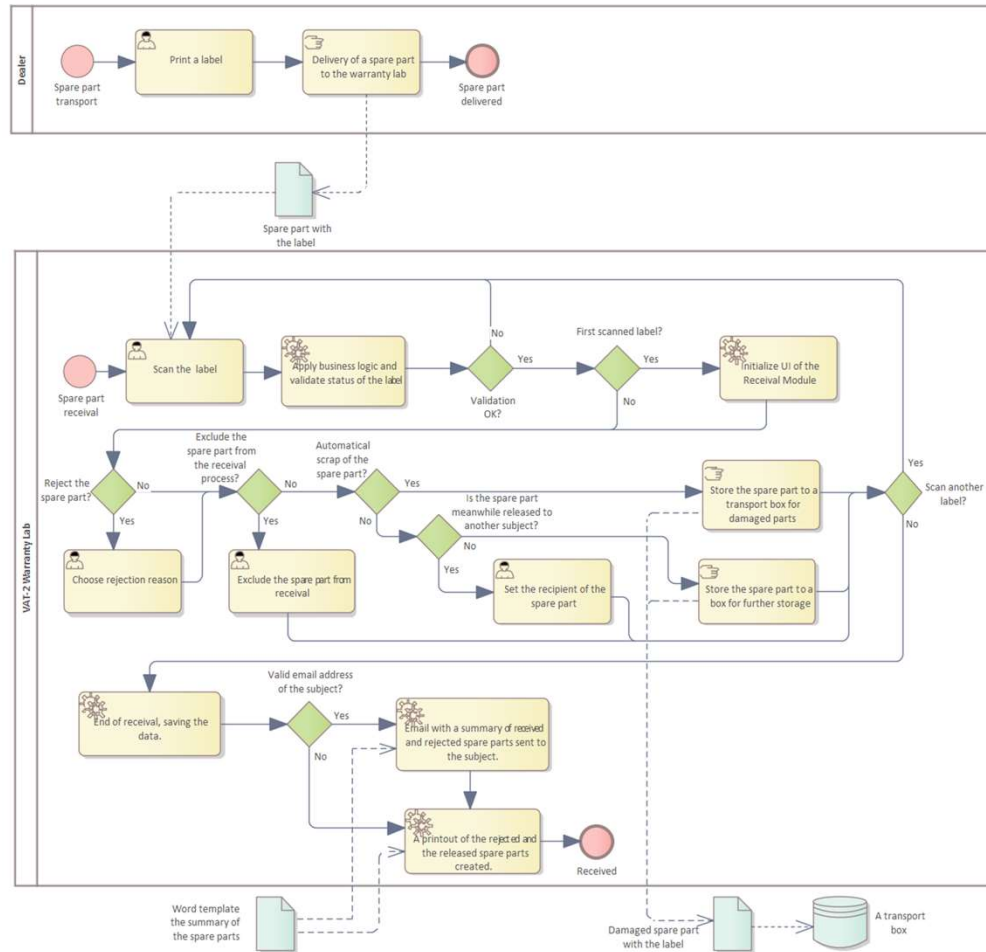
Detailed application architecture



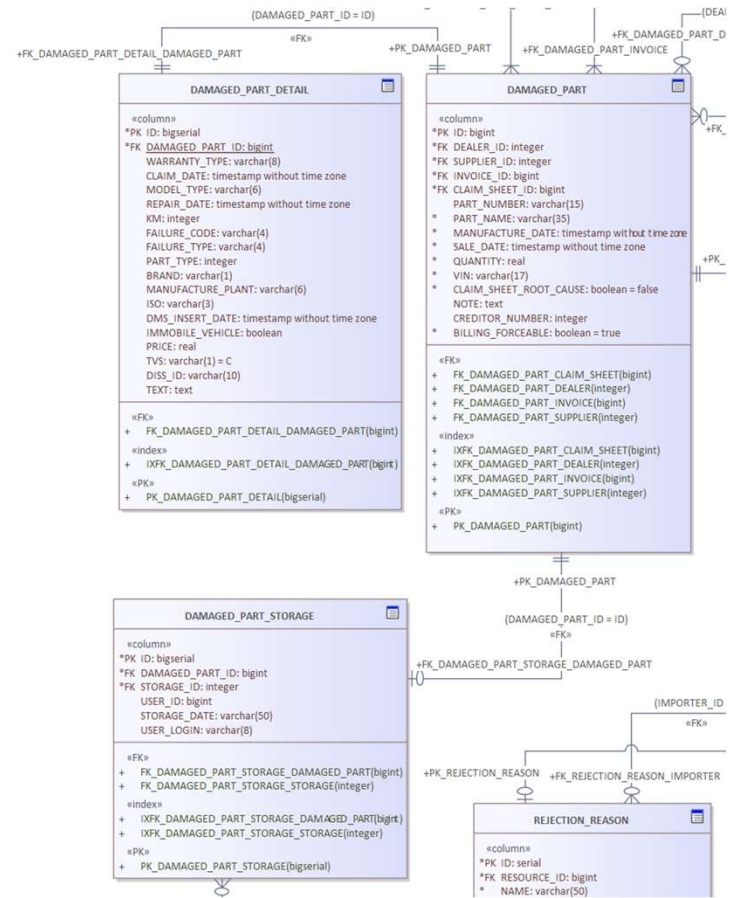
Business analysis – UML Use Case example



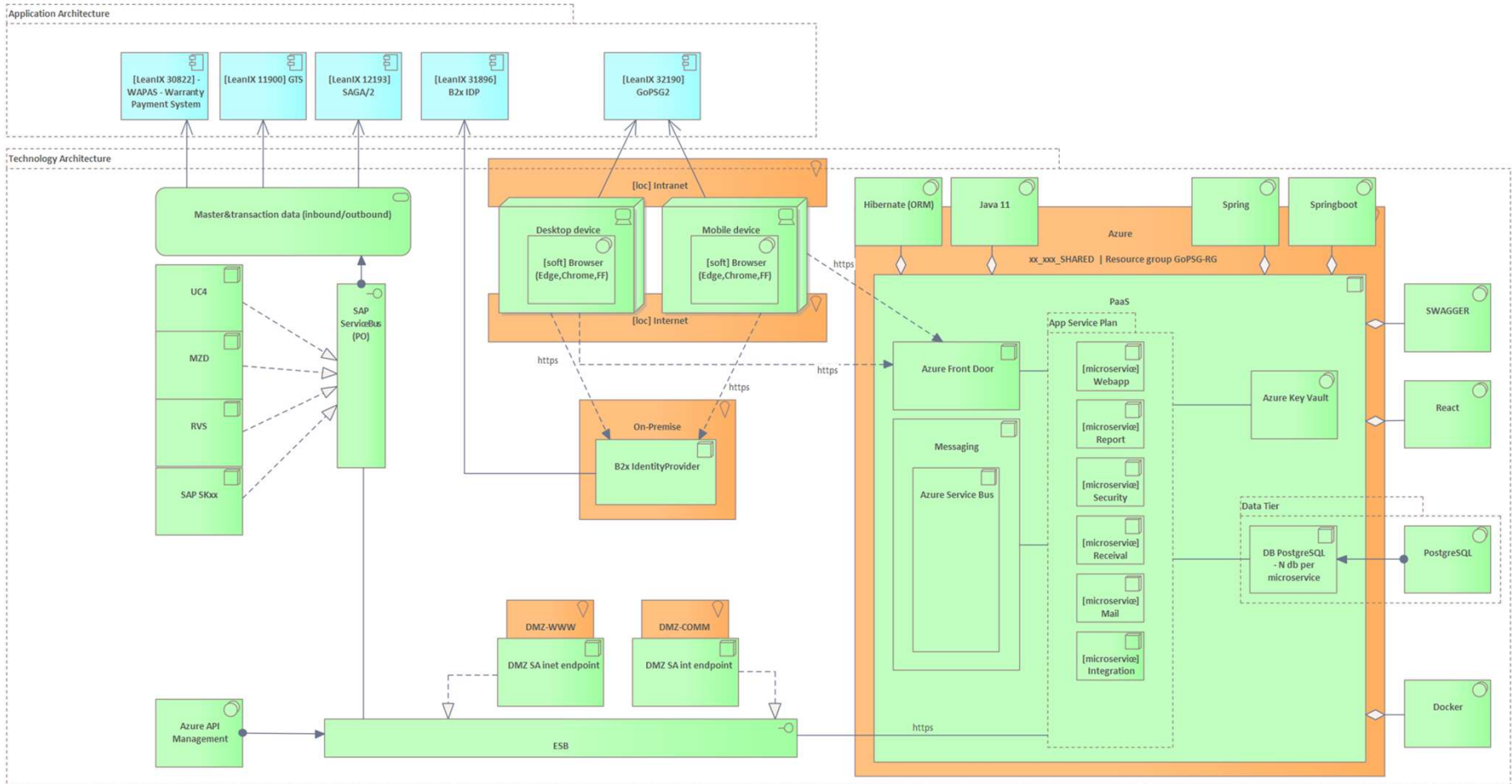
Business analysis – detailed process - BPMN



Preview of the data model



Architecture of the physical infrastructure



Project management – preview of the part of the sprint (JIRA)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FIV2011-1496 IM: FE: IR16549929 - Netiskne se kod zavady do PDF	Bugs	C	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FIV2011-1312 TECH: optimalizace pameti na Webapp	Bugs	K	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FIV2011-1229 ORG: FIO takeover - Azure dokumentace	AMS Takeover	K	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FIV2011-1350 RELEASE ?? 2023 - DEPLOYMENT NOTES - IMPORTANT	Tech epic		<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FIV2011-1457 QAPP Simon&Pavel			<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FIV2011-1470 AN: Zavesky - predat zadani k realizaci na WAPAS	SAP data - SAGA		<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FIV2011-1471 AN: Faktury- predat zadani k realizaci na WAPAS	SAP data - SAGA		<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FIV2011-1483 LAURA IM IR16144524			<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FIV2011-1504 BUG BE: Prijm - rejection receipt v emaile	Bugs		<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FIV2011-1482 AN/ORG: Popsat cestu k datum v PowerBI	Tech epic	K	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FIV2011-1490 TECH: Prevzeti prostredi do FIO * RR15749812	Org epic		<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FIV2011-323 AN: GDPR LH			<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FIV2011-1440 ZMENA DEFAULT RETRIEVAL DATE - FE: WEBAPP - Zmena defau...	Change requests	C	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FIV2011-1509 ZMENA DEFAULT RETRIEVAL DATE - BE: RECEIVAL - Zmena defa...	Change requests		<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FIV2011-1372 BE/FE: REPORT/WEBAPP - Uprava XLSX templaty pre vydajku	Change requests		<input type="checkbox"/>

Project's goal description

Complete re-development a of legacy solution into a new application GoPSG (handling of vehicle warranty and damaged parts).

The application is used for central evidence of all spare parts within the warranty process of a vehicle manufacturer and related operations and processes.

All vehicle parts exchanged during a warranty repair claimed by the customer are processed by the warranty lab. The cause of the defect is analyzed. This process precedes further technical development of future vehicle models so that similar defects are avoided in new releases. It is therefore necessary to cover part receipt, warehouse management, expedition of spare parts to the correct manufacturer, and payment to the dealership handling the customer claim.

The task of the team is to completely re-develop an application so that it is possible to centralize handling of all phases in damaged parts management in all the vehicle manufacturer's markets. Piloting to be done in the Czech Republic.

The original desktop application is replaced by a unified web application operated in a cloud environment.

Decommission of the old product is done by re-developing and replacing one functional module at a time. Both applications coexist for a certain period in the production environment with active data synchronization.

Technical quality

Solution

The new product is technologically developed with emphasis on code quality and automatization of deployment of the new release.

Code quality is assured by a high unit test coverage rate (BE ~85%), which decreases the costs of future development and maintenance.

The application is built to support scalability to foreign markets, multi-language support, and a user-friendly experience.

Simplification and enhancement

The original product required frequent interventions by the maintenance team.

In order to reduce maintenance costs, extra effort is invested in development of functionalities which influence business logic. The configuration can be made by a power-user with an administration role instead of waiting for a service request to be processed.



Contact

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