

Vincent Blondeau

Test Sucker

How to Convert Real Production
Objects to Automated Test Cases?



Lifeware



A SWISS COMPANY

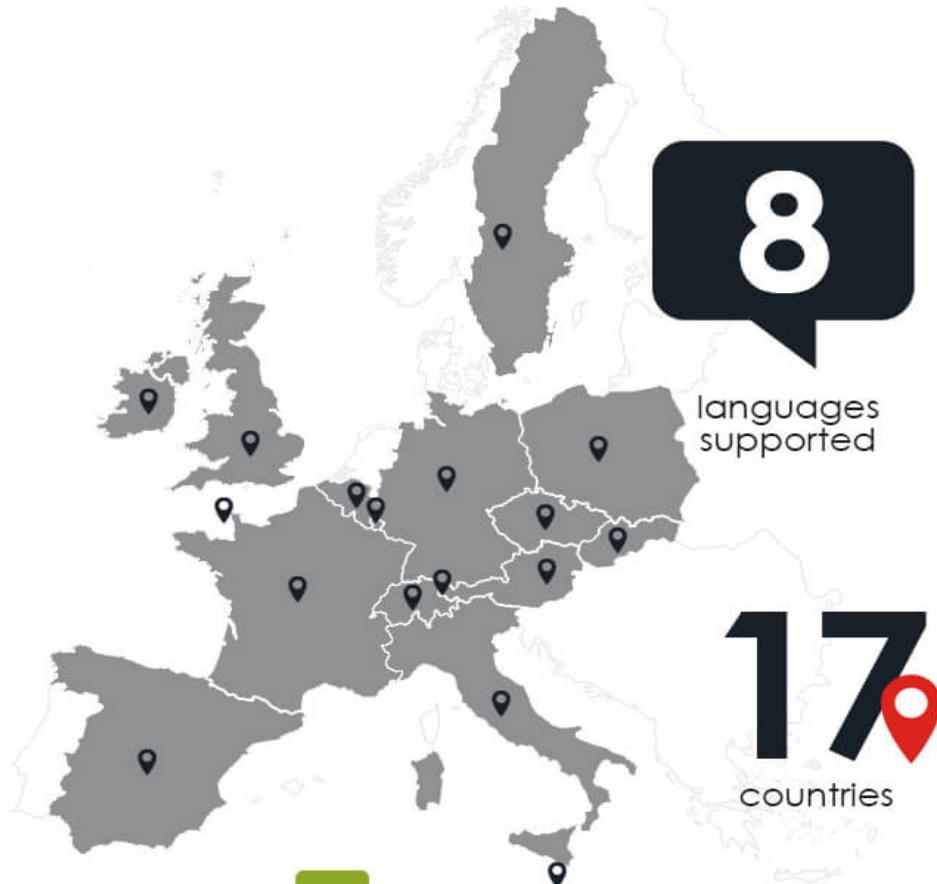
21 Years old

5 Founders are top management

60 Employees with strong methodology

4 Redundant datacenters





800.000
policies

17
countries

8

languages
supported

billion Euro
assets under
management

25 



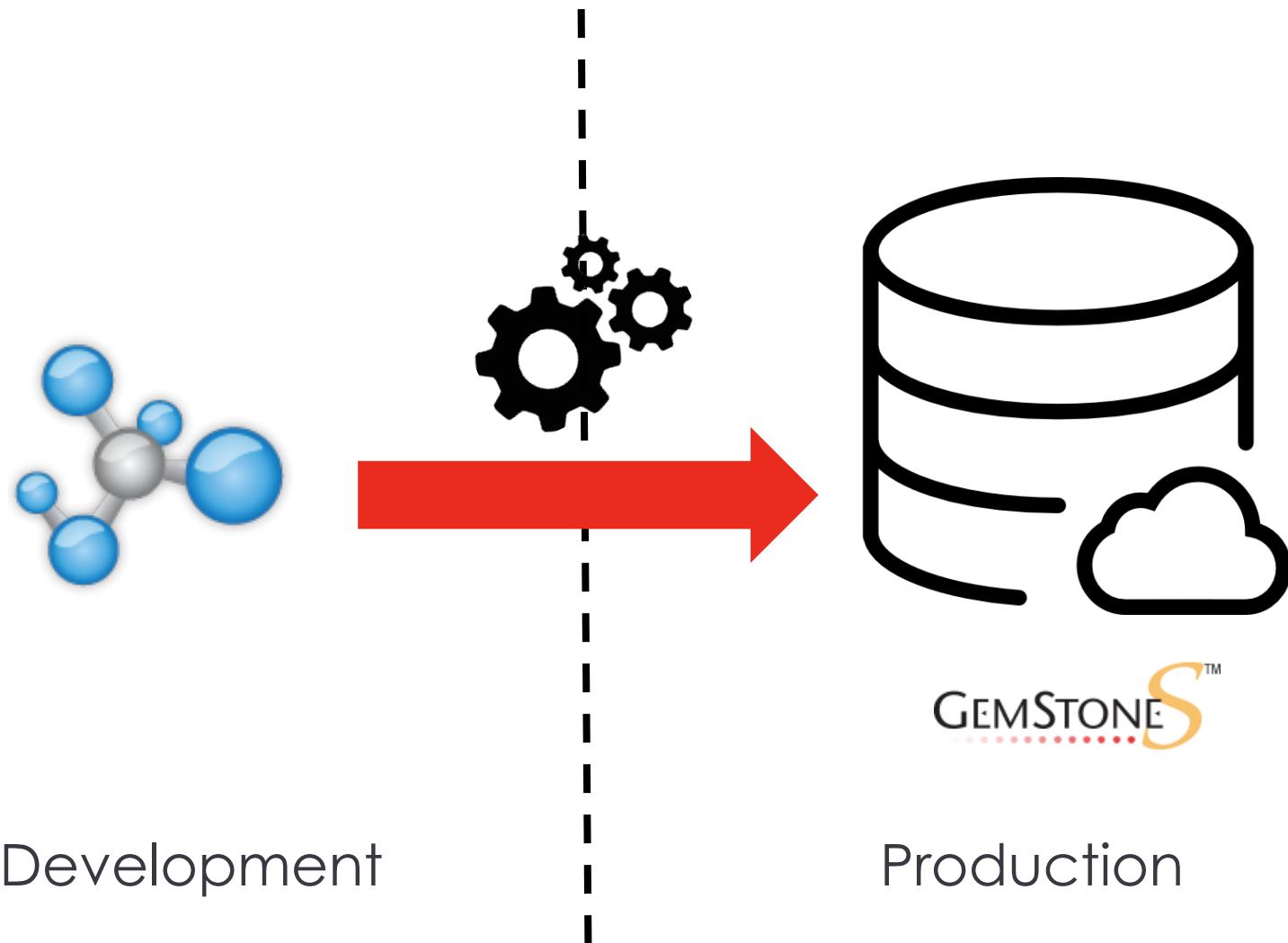
130.000
authorized users



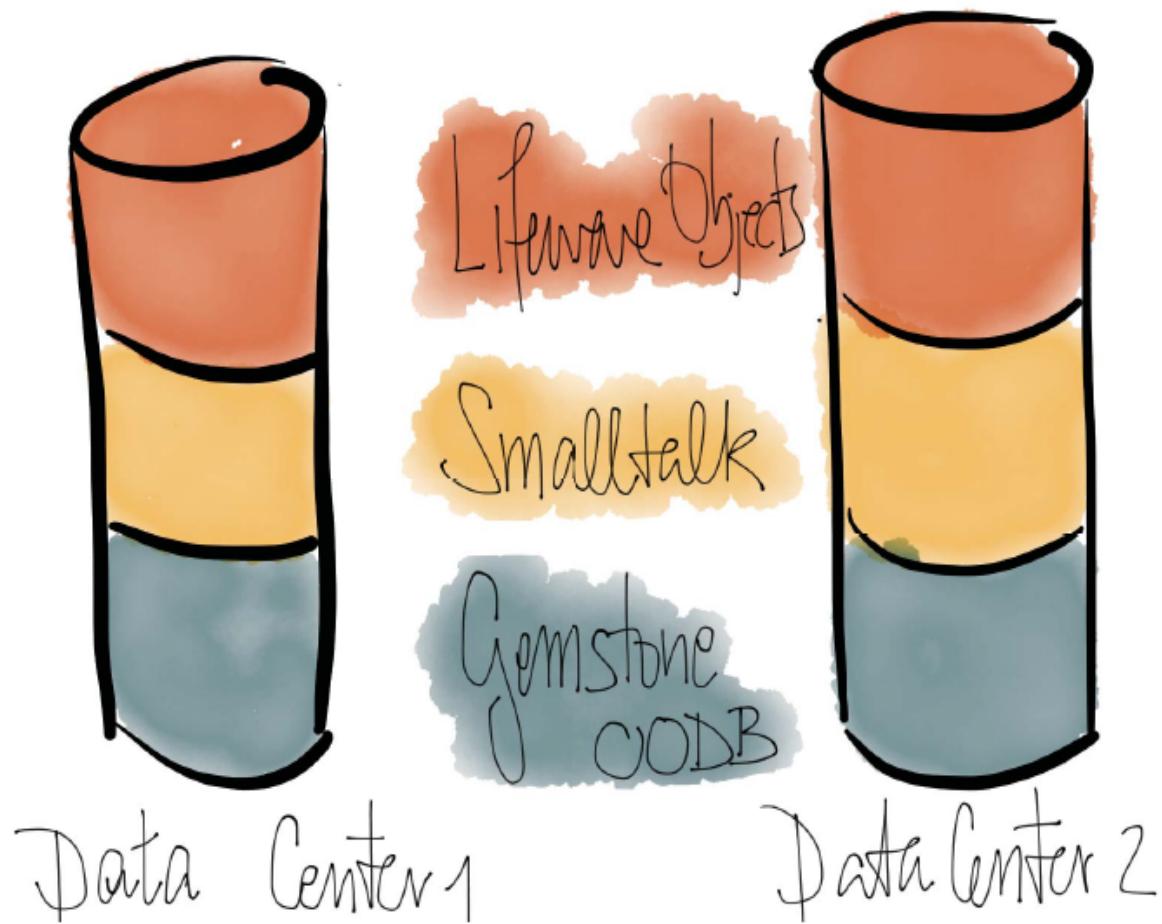
life insurance
products
implemented

200+

CORE TECHNOLOGY



OBJECTS ALL OVER



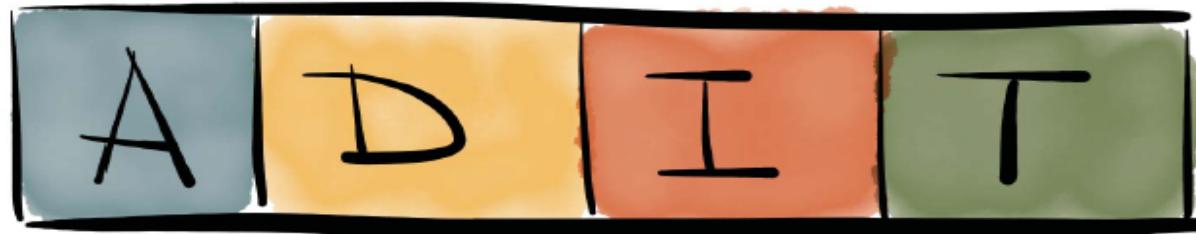
70 000
Classes

1 500 000
Methods

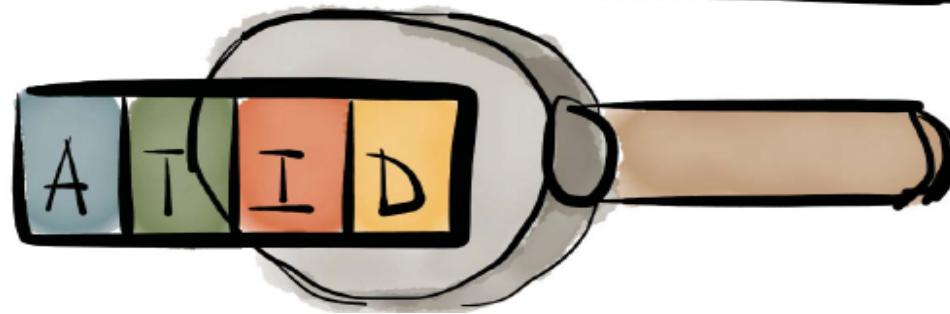
3 TB
Persisted objects

EXTREME EFFICIENCY

Classic



XP



AUTOMATIC TESTING

life is too short for manual testing

Lifeware automated testing infrastructure

95 000 tests in the code base

60 times a day all tests run

320 processors sustain our test environment

Σ coverage informs about untested code

CONTRACT CENTRIC SYSTEM

 life

Search 

Home / GSJ-1015-241, Kory N...

GSJ-1015-241, Kory Neolasioptera

Actions ▾

Key Data	Historie	Beiträge	Konti	Accounts (graphical)	Provisionen	Business Profile	World Check
2017	2018	2019					
01.07 Application	01.07 Dynamic increase	01.07 Dynamic increase					
01.07 Umstellung Provision	14.10 Reserve Correction						

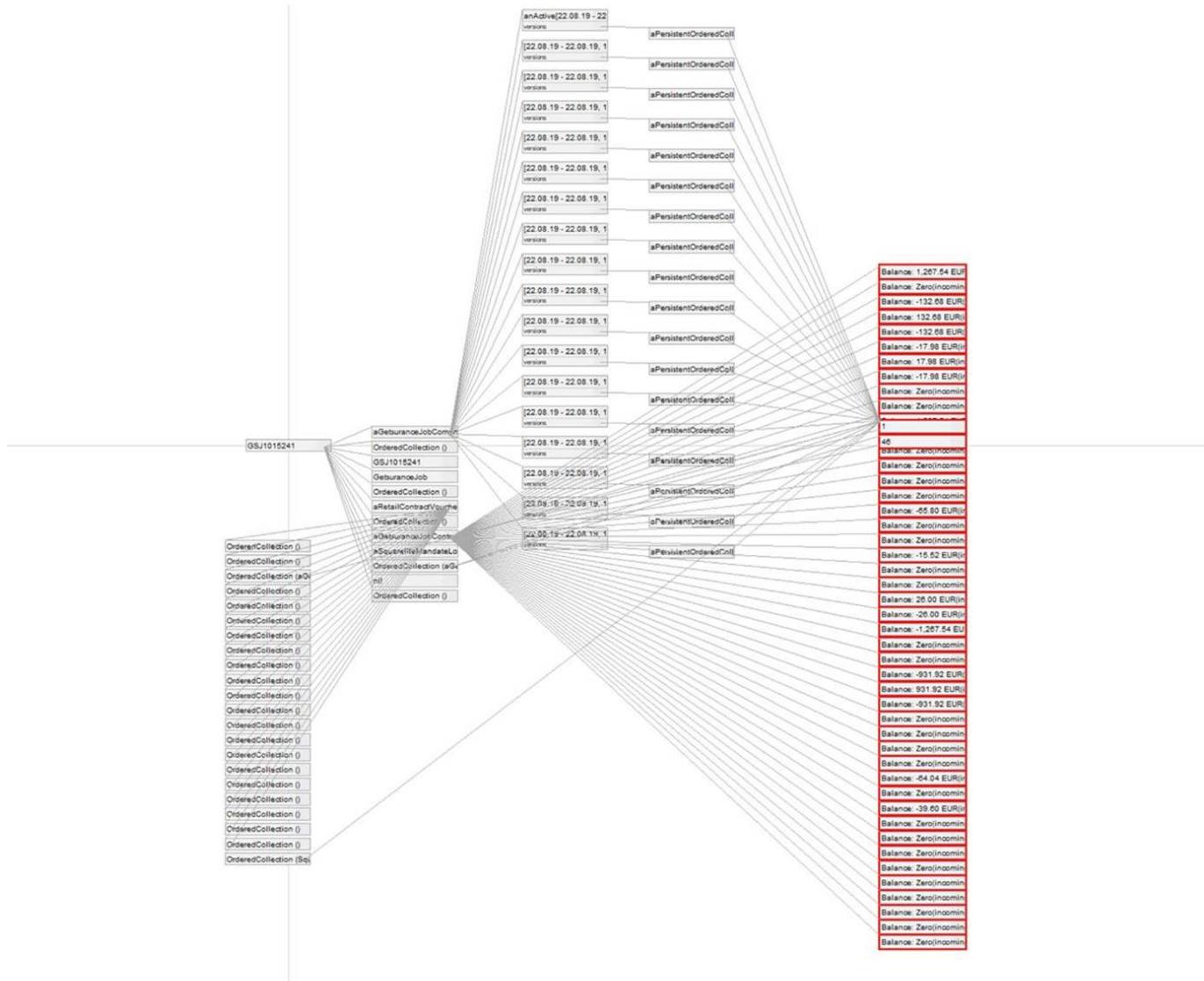
valid from 1 July 2019

Policyholder	Mr. Kory Neolasioptera, Sulzhoferstraße 16, DE-67744 Hohenöllen																		
Insured	Mr. Kory Neolasioptera, Sulzhoferstraße 16, DE-67744 Hohenöllen																		
Payer	Kory Neolasioptera, Sulzhoferstraße 16, DE-67744 Hohenöllen																		
Intermediary	Plautia Inc., Friedrichstraße 123, DE-10117 Berlin																		
Tariff	Job Premium																		
Duration	01.07.2017 - 30.06.2038 (21 years)																		
Premium	*** 49.97 EUR (monthly)																		
Premium breakdown	<table><tbody><tr><td>Alfa</td><td>3.35 EUR</td></tr><tr><td>Beta</td><td>0.71 EUR</td></tr><tr><td>Reinsurance Beta</td><td>1.67 EUR</td></tr><tr><td>Gamma</td><td>0.62 EUR</td></tr><tr><td>Stückkosten</td><td>2.60 EUR</td></tr><tr><td>Rückversicherung</td><td>36.93 EUR</td></tr><tr><td>Selbsbehalt</td><td>4.10 EUR</td></tr><tr><td>Zusatzrisiko</td><td>0.00 EUR</td></tr><tr><td>Reserve</td><td></td></tr></tbody></table> <p> Details</p>	Alfa	3.35 EUR	Beta	0.71 EUR	Reinsurance Beta	1.67 EUR	Gamma	0.62 EUR	Stückkosten	2.60 EUR	Rückversicherung	36.93 EUR	Selbsbehalt	4.10 EUR	Zusatzrisiko	0.00 EUR	Reserve	
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Rückversicherung	36.93 EUR																		
Selbsbehalt	4.10 EUR																		
Zusatzrisiko	0.00 EUR																		
Reserve																			
Dynamic	2%																		
Benefit Dynamic	0%																		
Annual pension	*** 11,820.00 EUR																		
Death benefit	0.00 EUR																		
Job class	1 - Versicherungsvertreter Aussendienst																		
RMI	24.6																		

DEMO

**OR BACKUP
SLIDES...**

CONTRACT CENTRIC SYSTEM



CONTRACT TOOLS

 Inbox  Herman Saturniidae  Calendar  Docs  Processes  Forex  Queue  Pivot  ZV  Settle



Search

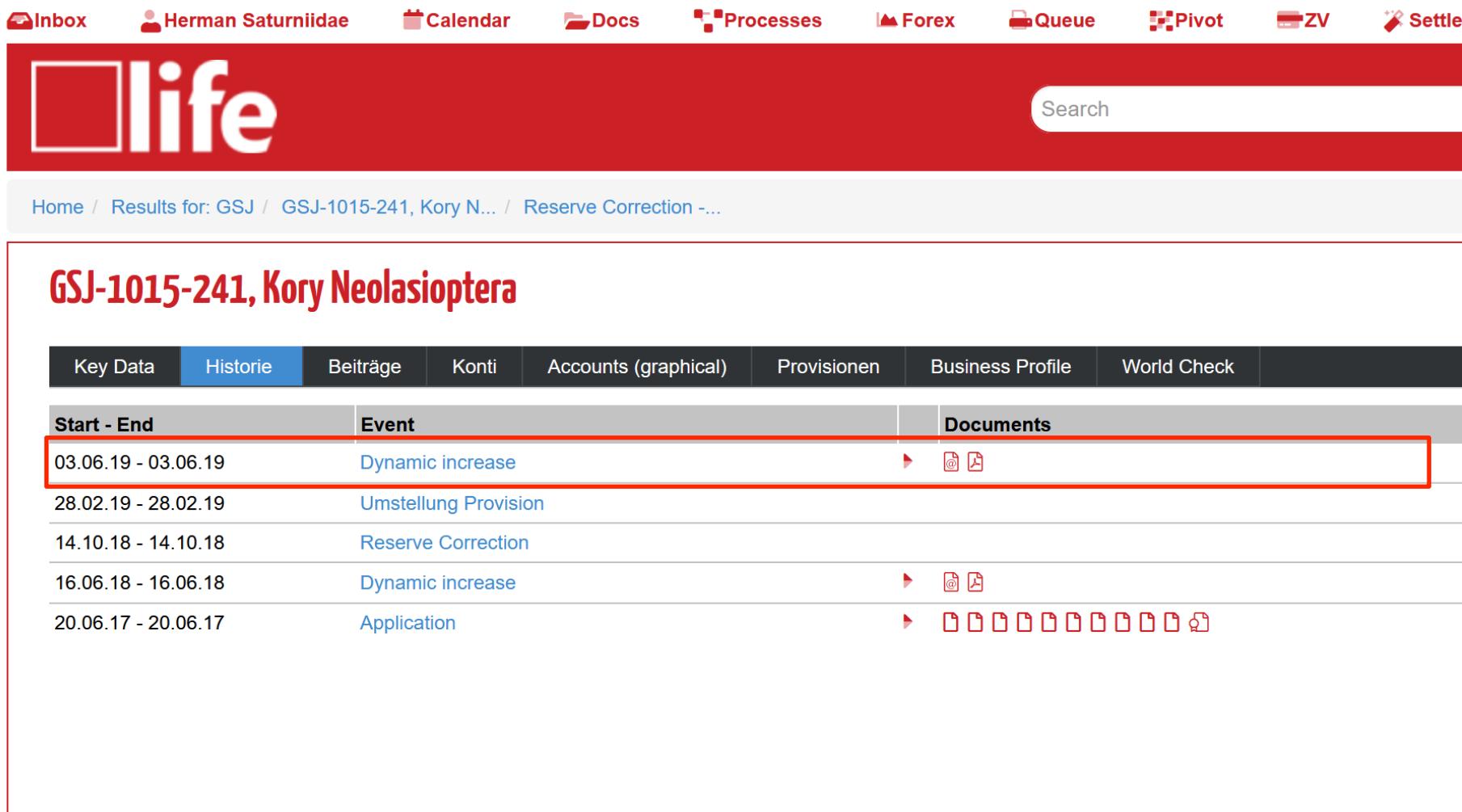
[Home](#) / [Results for: GSJ](#) / [GSJ-1015-241, Kory N...](#) / [Reserve Correction -...](#)

GSJ-1015-241, Kory Neolasioptera

Key Data  Historie Beiträge Konti Accounts (graphical) Provisionen Business Profile World Check

Start - End	Event	Documents
03.06.19 - 03.06.19	Dynamic increase	  
28.02.19 - 28.02.19	Umstellung Provision	
14.10.18 - 14.10.18	Reserve Correction	
16.06.18 - 16.06.18	Dynamic increase	  
20.06.17 - 20.06.17	Application	         

CONTRACT TOOLS



sophisticated simplicity

CONTRACT TOOL

Dynamic increase - GSJ-1015-241, Kory Neolasioptera

[Changes](#)[Logbook](#)[Correspondence](#)[Documents](#)[Documentstree](#)[Upload](#)

Dynamic increase

Start	Monday, 03.06.2019, 07:00:45, k.A.
End	Monday, 03.06.2019, 07:00:42, k.A.
Duration	23 hours, 59 minutes, 57 seconds

Comments

CONTRACT TOOL

Dynamic increase - GSJ-1015-241, Kory Neolasioptera

Changes Logbook Corr

a SquarelifeDynamicTool

Object Edit Go History Explore Tools Help

Dynamic increase

Start

End

Duration

Comments

GS Basic GS Delegate

- self
- status
- contract
- effectiveDate
- task
- correspondenceEditor
- doubleCheck
- logbook
- customerClubDocuments
- chat
- tracker
- overrides
- oldBenefit
- newBenefit
- increaseTimestamp

self: SquarelifeDynamicTool - GSJ1015241
status: aFinishedStatus
contract: GSJ1015241
effectiveDate: aCSDate 1. Jul. 2019
task: 'Dynamic increase' oid: <#Task' 8bbc6527-85bc-11e9-8e66-ecf4bbd66cf>
correspondenceEditor: aSquareEditableLetter
doubleCheck: aReasonWithFlag
logbook: aSquarelifeLogBook
chat: aChat
tracker: anUserTracker
overrides: anOverrides
oldBenefit: 11631 EUR
newBenefit: 11820 EUR
increaseTimestamp: 03.06.19, 07:00:42:000

TEST SUCKER METHODS

Package [Class](#)

- Object
- PersistentObject
- SquarelifeAbstractTool
- SquarelifeTool
- **SquarelifeDynamicTool**

 **Squarelife Tools** (+2864)

Instance	Class	Shared Variable	Instance Variable
4	accessing		▲ tag
5	actions		▲ templates
3	documents		updateAsuroVersion:at:
1	events		updateGetsuranceJobVers
1	initialize-release		▲ updateVersion:at:
1	preparing documents		▲ writeSuckerEventsOn:
1	private		▲ _translation

[Source](#) [Definition](#) [Rewrite](#) [Dynamic test rewrite](#) [Code Critic](#) [Comment](#) [Watches](#) [Changes](#)

writeSuckerEventsOn: `stream`

`stream nextPut: (SquarelifeTidyUpBatchEvent timestamp: task end)`

TEST SUCKER METHODS

Package [Class](#)

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[Source](#) [Definition](#) [Rewrite](#) [Dynamic test rewrite](#) [Code Critic](#) [Comment](#) [Watches](#) [Changes](#)

writeSuckerEventsOn: stream

```
stream nextPut: (SquarelifeTidyUpBatchEvent timestamp: task end)
```

TEST SUCKER METHODS

Package [Class](#)

- Object
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Squarelife Tools (+2864)

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[Source](#) [Definition](#) [Rewrite](#) [Dynamic test rewrite](#) [Code Critic](#) [Comment](#) [Watches](#) [Changes](#)

writeSuckerEventsOn: *stream*

```
stream nextPut: (SquarelifeTidyUpBatchEvent timestamp: task end)
```

Package [Class](#)

- Object
- PersistentObject
- GenerableReplayEvent
- SimpleEvent
- **SquarelifeTidyUpBatchEvent**

Events (+291)

Instance	Class	Shared Variable	Instance Variable
1	accessing		▲ =
2	comparing		▲ hash
1	events		setTimestamp:
1	private		templateWith:

[Source](#) [Definition](#) [Rewrite](#) [Dynamic test rewrite](#) [Code Critic](#) [Comment](#) [Watches](#) [Changes](#)

templateWith: *builder*

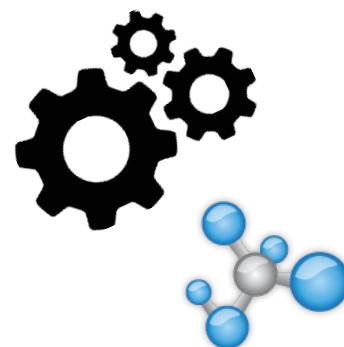
```
self timestamp: timestamp.
self runTidyUpBatchAt: timestamp
```

CONVERSION TO TEST

templateWith: builder

```
self timestamp: timestamp.
```

```
self runTidyUpBatchAt: timestamp|
```



Inlining refactorings
- Variables
- Methods

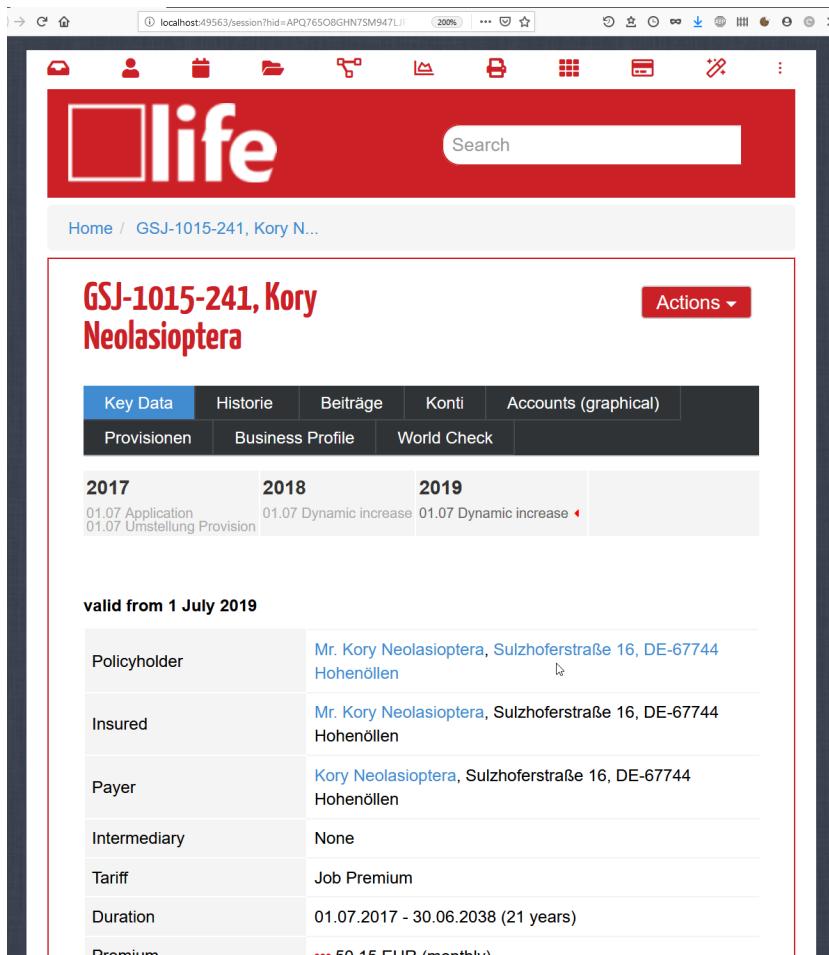


```
self
```

```
timestamp: (3 jun: 2019) @ '07:00:42.000';  
runTidyUpBatchAt: (3 jun: 2019) @ '07:00:42.000'
```

TEST SUCKED

Development



Home / GSJ-1015-241, Kory N...

GSJ-1015-241, Kory Neolasioptera

Actions ▾

Key Data	Historie	Beiträge	Konti	Accounts (graphical)
Provisionen	Business Profile	World Check		

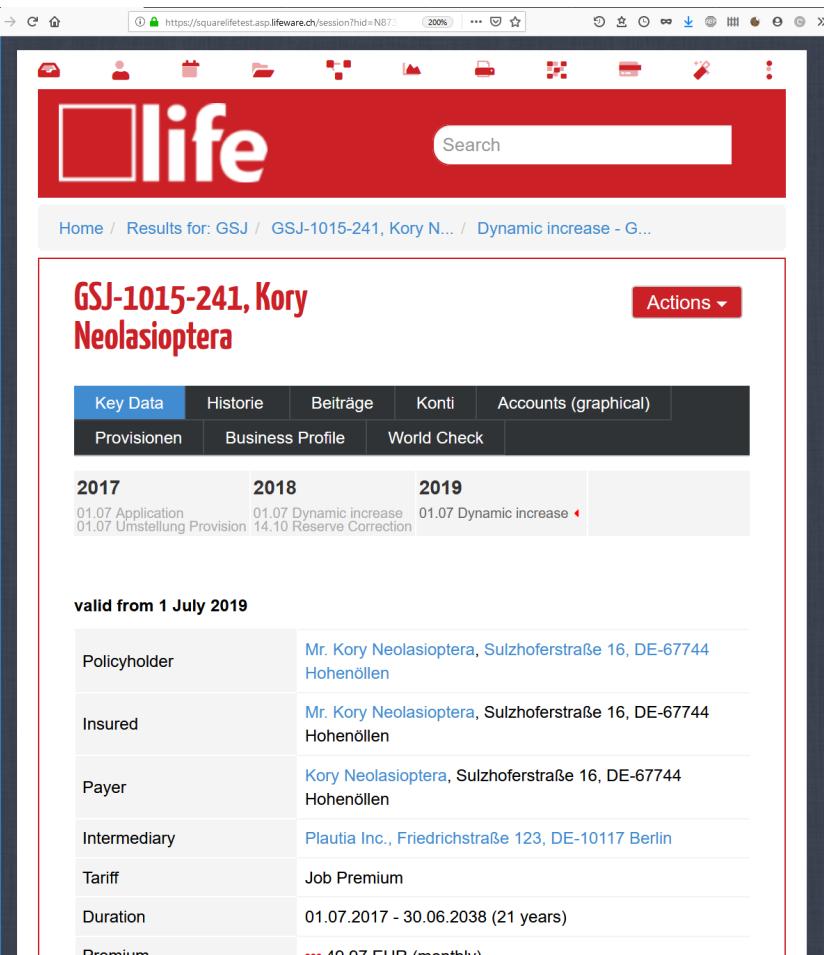
2017 2018 2019

01.07 Application
01.07 Umstellung Provision 01.07 Dynamic increase 01.07 Dynamic increase ↗

valid from 1 July 2019

Policyholder	Mr. Kory Neolasioptera, Sulzhoferstraße 16, DE-67744 Hohenöllen
Insured	Mr. Kory Neolasioptera, Sulzhoferstraße 16, DE-67744 Hohenöllen
Payer	Kory Neolasioptera, Sulzhoferstraße 16, DE-67744 Hohenöllen
Intermediary	None
Tariff	Job Premium
Duration	01.07.2017 - 30.06.2038 (21 years)
Premium	50.15 EUR (monthly)

Production



Home / Results for: GSJ / GSJ-1015-241, Kory N... / Dynamic increase - G...

GSJ-1015-241, Kory Neolasioptera

Actions ▾

Key Data	Historie	Beiträge	Konti	Accounts (graphical)
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01.07 Application
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Intermediary	Plautia Inc., Friedrichstraße 123, DE-10117 Berlin
Tariff	Job Premium
Duration	01.07.2017 - 30.06.2038 (21 years)
Premium	49.97 EUR (monthly)

END OF DEMO BACKUP SLIDES

LIMITATIONS

Test sucker

- does not handle manual changes
- has to be implemented for each tool
- may become tedious

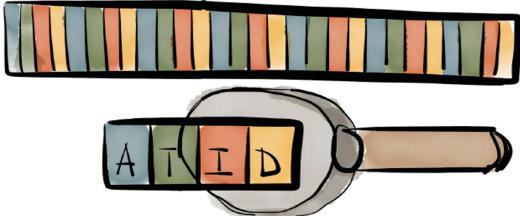
```
templateWith: builder
  self testcase timestamp: self timestamp.
  builder newApplicationNamed: application contract policyNumber
    currency: application version currency.
  (builder application)
    policyholder: (builder partnerWithEmail: application policyholder email);
    insured: (builder partnerWithEmail: application insured email);
    broker: builder client broker3A;
    channel: builder client brokerC4C;
    origin: application version origin;
    plan: application version plan;
    initialCredit: application version initialCredit;
    creditAmortizationDuration: application version creditAmortizationDuration;
    creditRate: application version creditRate;
    currency: application version currency;
    deathCoverage: true;
    additionalCov
  (builder application)
    apply;
    putInForceAt: application task end by: builder martaGiorgetti
```

EXTREME EFFICIENCY

Classic



XP



CONTRACT TOOLS

Inbox Herman Saturnidae Calendar Docs Processes Forex Queue Pivot ZV Settle

Search

life

Home / Results for: GSJ / GSJ-1015-241, Kory N... / Reserve Correction -...

GSJ-1015-241, Kory Neolasioptera

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Lifeware

sophisticated simplicity

TEST SUCKED

Development

life

Home GSJ-1015-241, Kory N...

GSJ-1015-241, Kory Neolasioptera

Actions

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Policyholder Mr. Kory Neolasioptera, Sulzhoferstraße 16, DE-67744 Höheröden

Insured Mr. Kory Neolasioptera, Sulzhoferstraße 16, DE-67744 Höheröden

Payer Kory Neolasioptera, Sulzhoferstraße 16, DE-67744 Höheröden

Intermediary None

Tariff Job Premium

Duration 01.07.2011 - 30.06.2038 (21 years)

Premium 00.00 EUR (month(s))

Production

life

Home Results for: GSJ / GSJ-1015-241, Kory N... / Dynamic increase - G...

GSJ-1015-241, Kory Neolasioptera

Actions

Key Data Historie Beiträge Konti Accounts (graphical) Provisionen Business Profile World Check

2017 2018 2019

03.07 Application 01.07 Dynamic increase 01.07 Dynamic increase 01.07 Umstellung Provision 14.10 Reserve Correction

valid from 1 July 2019

SQUARELIFETEST 23.06.19 02:00:00 - INTEGRATION VERSION 23.06.19_07.52

Policyholder Mr. Kory Neolasioptera, Sulzhoferstraße 16, DE-67744 Höheröden

Insured Mr. Kory Neolasioptera, Sulzhoferstraße 16, DE-67744 Höheröden

Payer Kory Neolasioptera, Sulzhoferstraße 16, DE-67744 Höheröden

Intermediary Paula Inc., Friedrichstraße 123, DE-10117 Berlin

Tariff Job Premium

Duration 01.07.2011 - 30.06.2038 (21 years)

Premium 00.00 EUR (month(s))

lifeware.ch
info@lifeware.ch





We are looking for innovative problem solvers!



Luxembourg



Switzerland

Join us to

- Solve real world problems
- Design innovative solutions
- Transition to Pharo

hresource@lifeware.ch