

The Return of Process Automation

@berndruecker

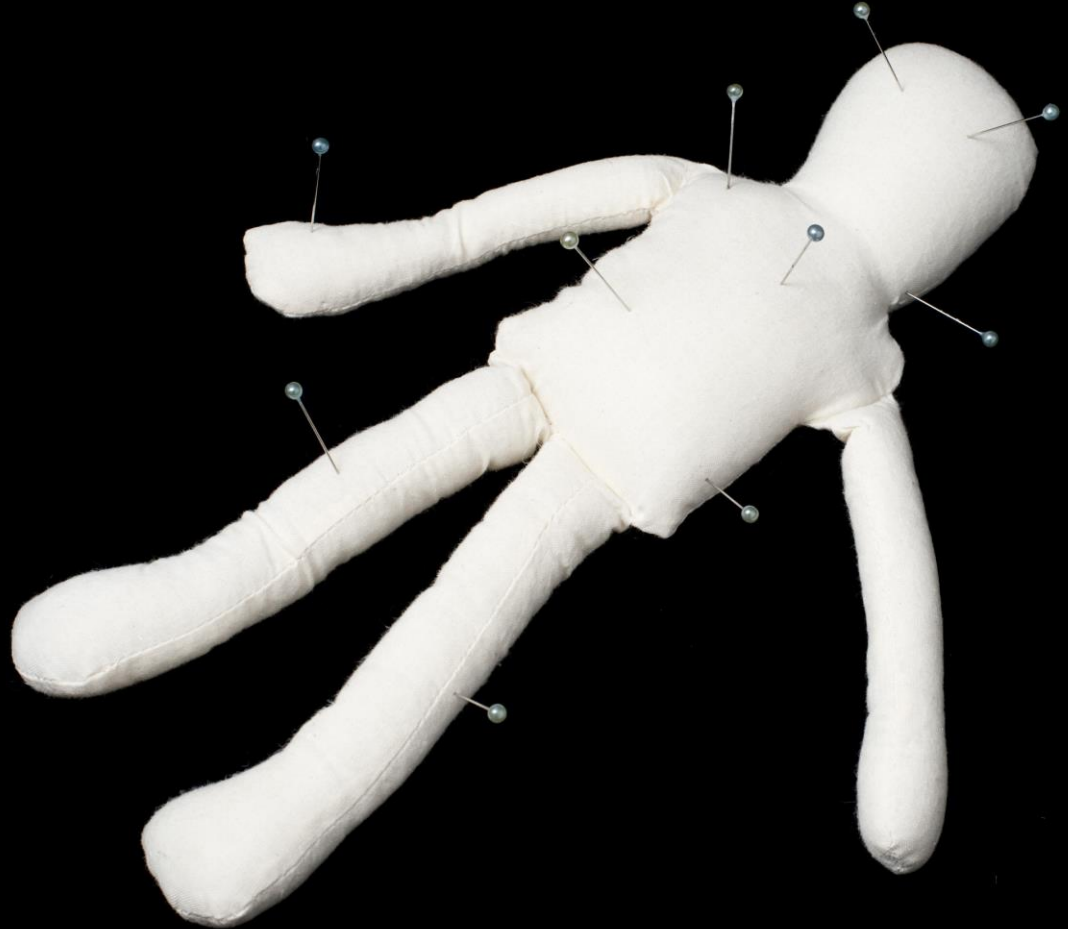


Ehm, I am sorry, but...

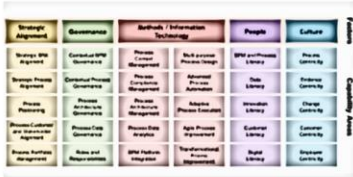
Was it ever really gone?

Wrong Perception of „BPM“

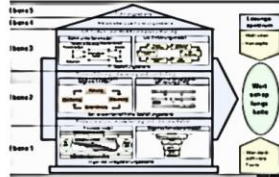
(Business Process Management)



Google for „BPM Frameworks“



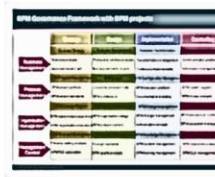
BPM Capability Framework | BPM in the Digital Age
digital-bpm.com



Datei:BPM-Framework.png - Wikipedia
de.wikipedia.org



Enterprise BPM framework
ariscommunity.com



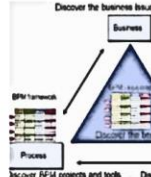
Enterprise BPM Framework
slideshare.net



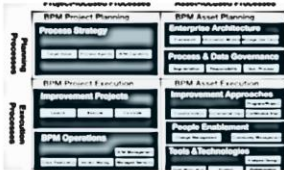
Enterprise BPM framework
ariscommunity.com



Enterprise BPM Framework
slideshare.net



Part 13: Enterprise BPM
blogs.sap.com



The BPM-D Process Framework - The Process...
researchgate.net



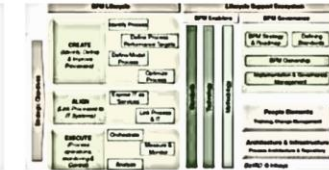
An Exploration into Future Business Process Management...
link.springer.com



Business Process Management
ventum-consulting.com



Enterprise BPM Framework
slideshare.net



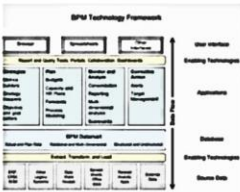
Business Process Management Framework for Ana...
ebayr.net



Part 10: Enterprise BPM framework; The mature...
blogs.sap.com



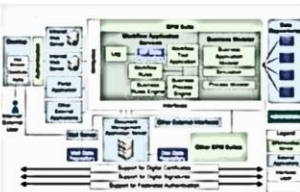
History SAP BPM Framework - [PDF Doc...
documents.pub



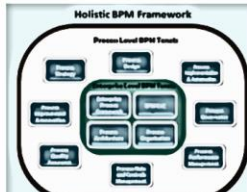
BPM Industry Framework | BPM Partners
bpmpartners.com



Class Notes: Consider...
bptrends.com



Business process management - Wikipedia
en.wikipedia.org



BPM, BPM Training, BPM Training in Indi...
silverfirconsulting.com



The Business Performance Management (BPM) Framework...
artim.consulting



VBE & VO Integral Business Pro...
researchgate.net

Google for „low code“

Google search results for "low code".

Search filters: Alle, News, Bilder, Videos, Bücher, Mehr, Einstellungen, Suchfilter.

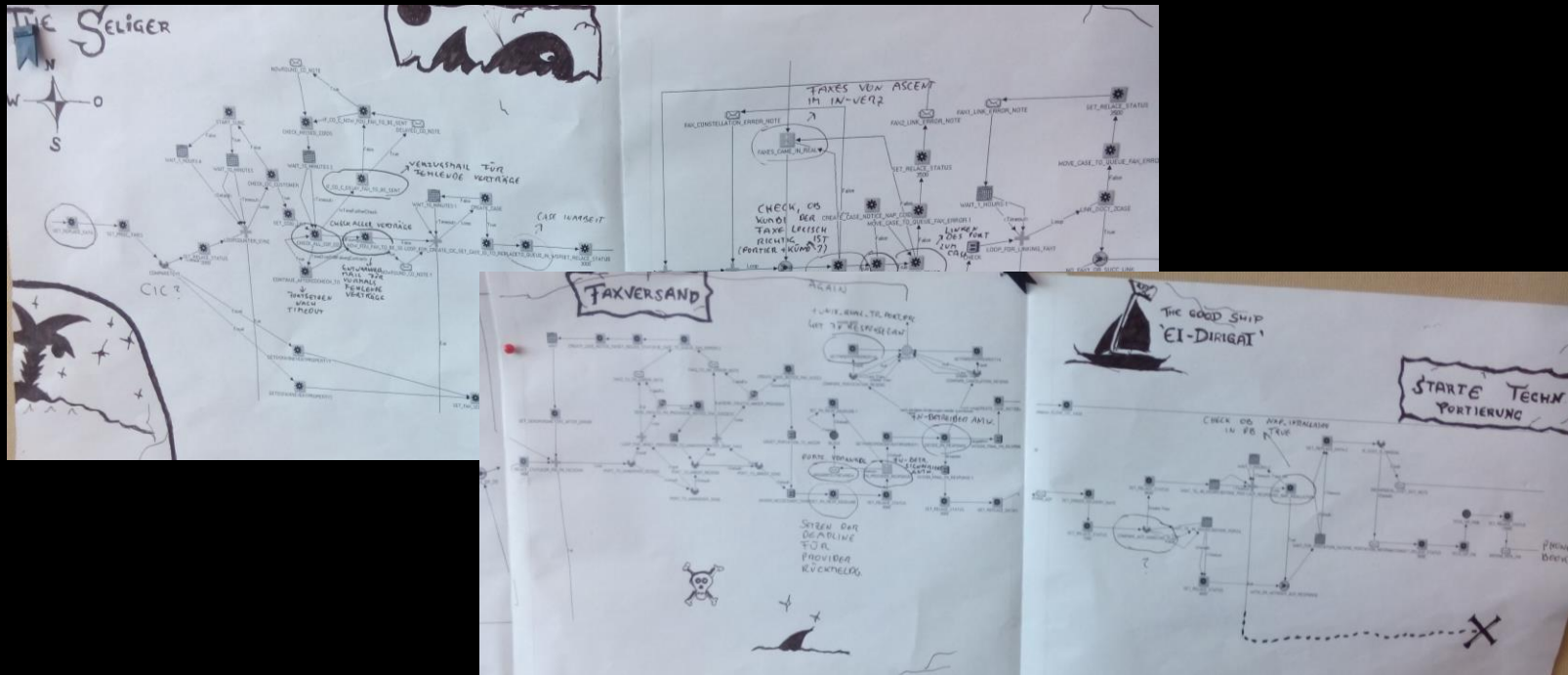
Filters: Größe, Farbe, Typ, Zeit, Creative-Commons-Lizenzen, Löschen.

Tags: south africa, south african, languages, software, verge3d, ted eytan, excelfix, drupal, php, lchf, 3ds max, cape town, excel, languages spoken, programming, computer.

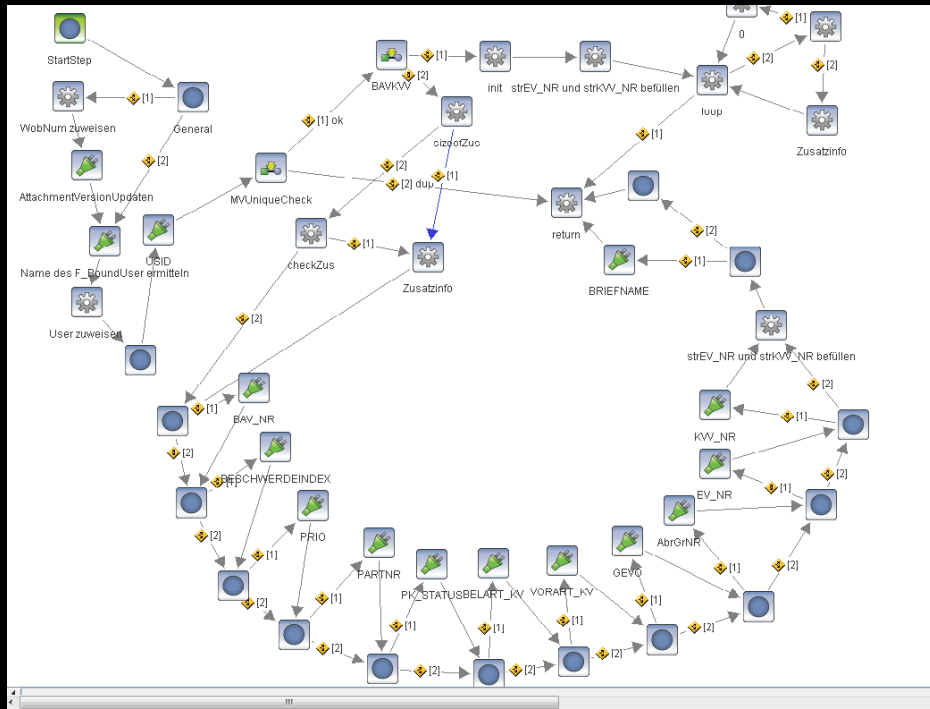
Results:

- Low-code and no-code tools continue to drive the w... dries
- File:WebRatio-Platform-interface.png - Wikimedia Co... commons.wikimedia.org
- File:Arduino IDE - Blink.png - Wiki... commons.wikimedia.org
- Frequently Asked Questions on Verge3D - Soft8... soft8soft.com
- Drupal's long-term growth obstacles | Dries Buytaert dries
- Low-carbohydrate diet, ... flickr.com
- File:Semaforo code.png - Wikimedia Commons commons.wikimedia.org
- Ortsschild Zülöw-Gro... onlinestreet.de
- Verge3D workflow for Blender, 3ds Max or Maya artists ... soft8soft.com
- Dummerstorf Pankelow
- The 11 languages of South... southafrica-info.com
- Ortsschild Gägelow-Jamel kostenlos: Downl... onlinestreet.de
- The best repair software for acddb & ... cimaware.com
- File:Délectronique Code Ard 2.png - ... commons.wikimedia.org
- aws.png | Christopher Penn | Flickr flickr.com
- Frequently Asked Ques... soft8soft.com
- Excel repair softw... cimaware.com
- South Africa's languages
- More Strange Behavior
- Ähnliche Suchanfragen: arduino
- International Small Business Journal

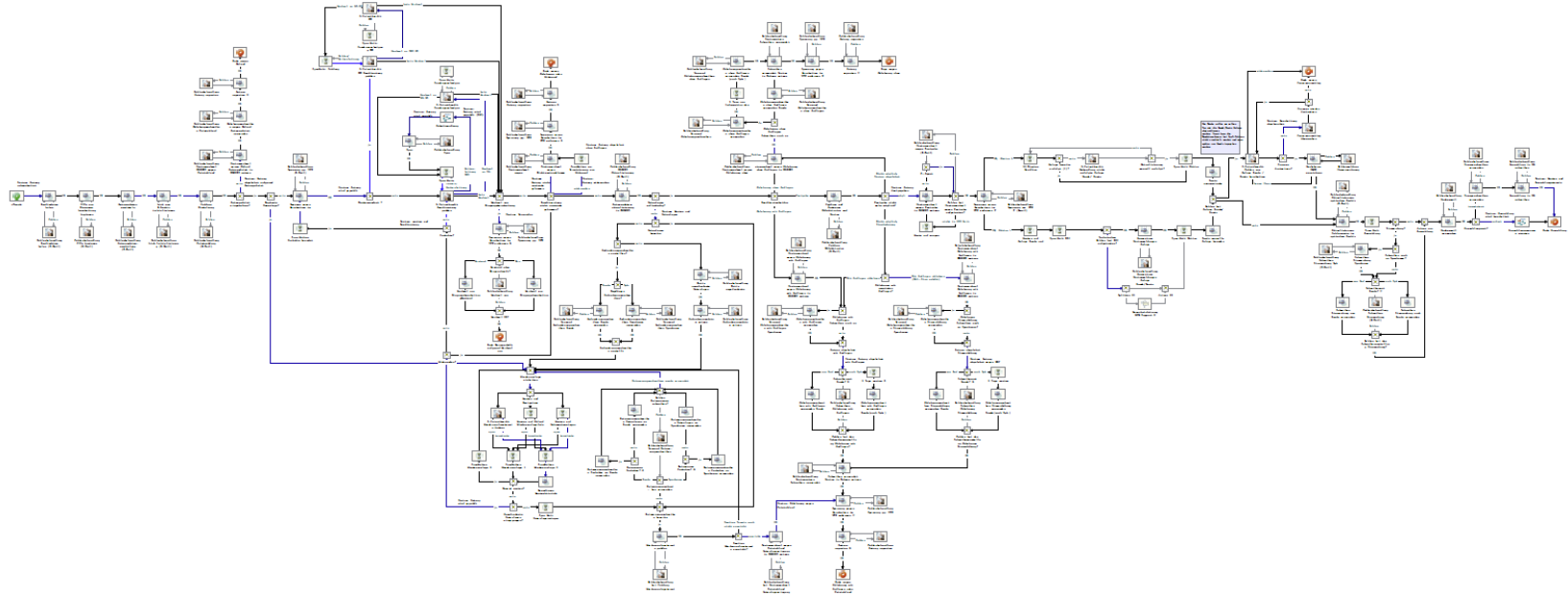
Models From the Wild...



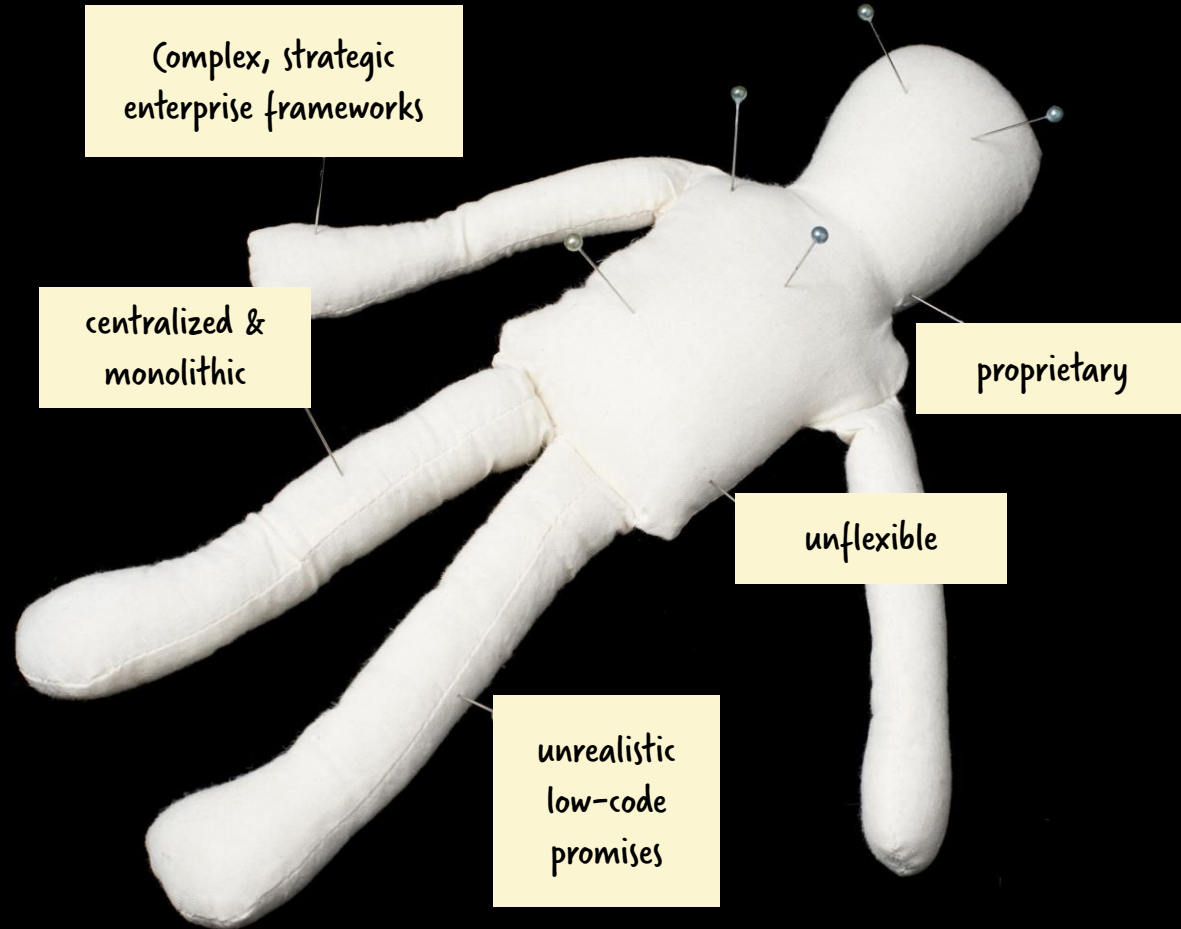
Models From the Wild...



Models From the Wild...



Wrong Perception of BPM





The age of Amazon

Jeff Bezos v the world: why all companies fear 'death by Amazon'

<https://www.theguardian.com/technology/2018/apr/24/amazon-jeff-bezos-customer-data-industries>

Change is the only constant

→ Agility

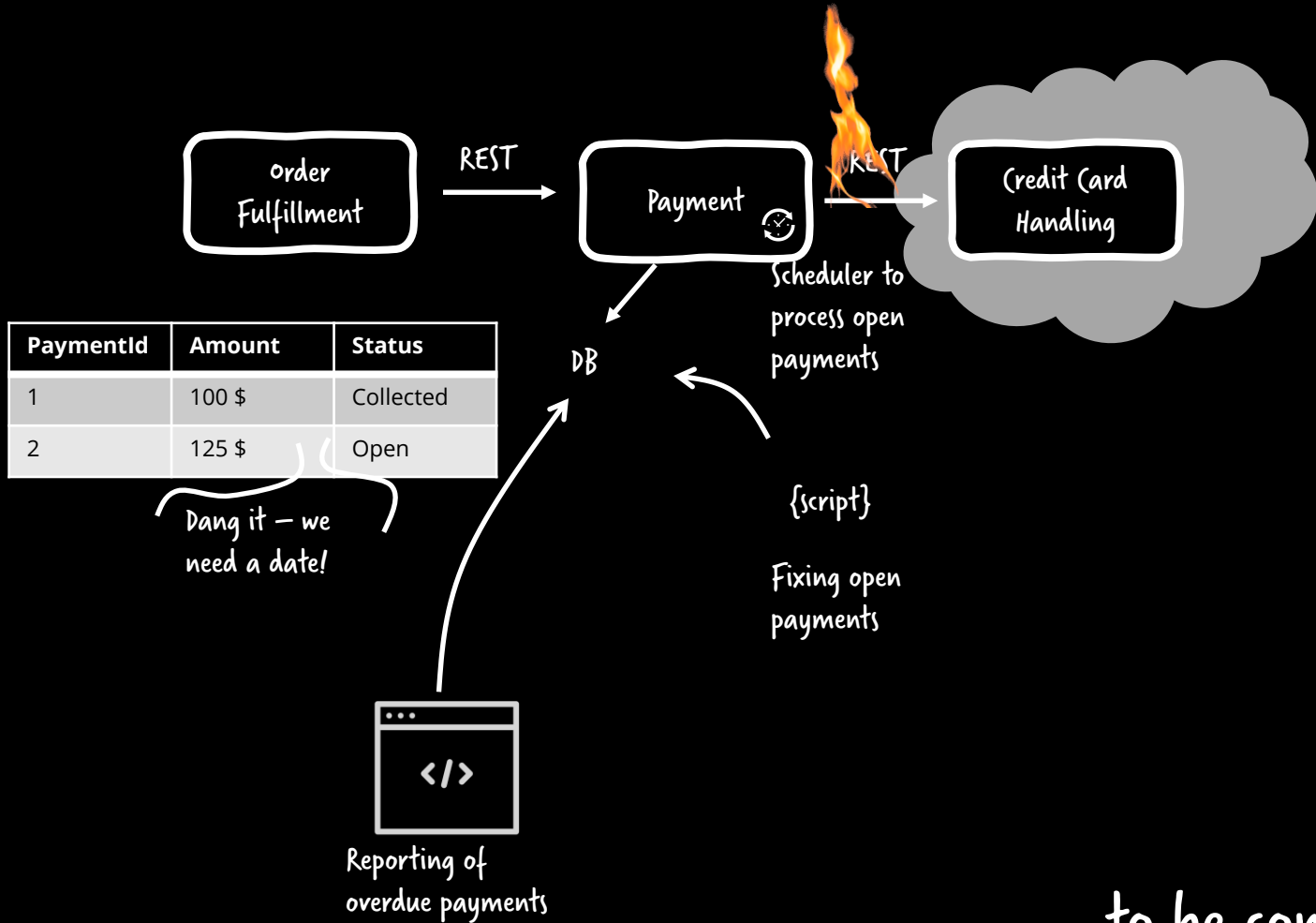
”

We don't know what we will need tomorrow.
But we do know that we will need something.
We have to be able to move quickly!

(10 of a German insurance company in 2019)

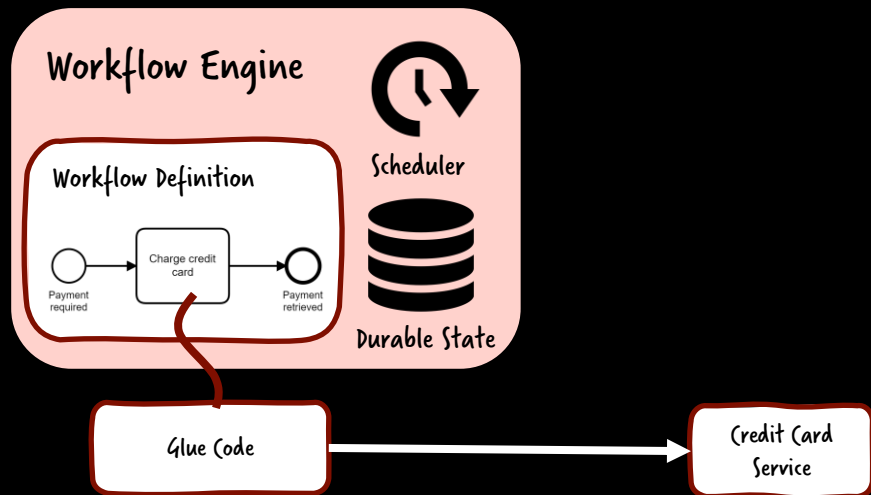
And you?





...to be continued...

Using a workflow engine instead



Workflow Engine:

Is stateful

Can wait

Can retry

Can escalate

Can compensate

Provides visibility



Process
Automation





Process
Automation

Solve Problems



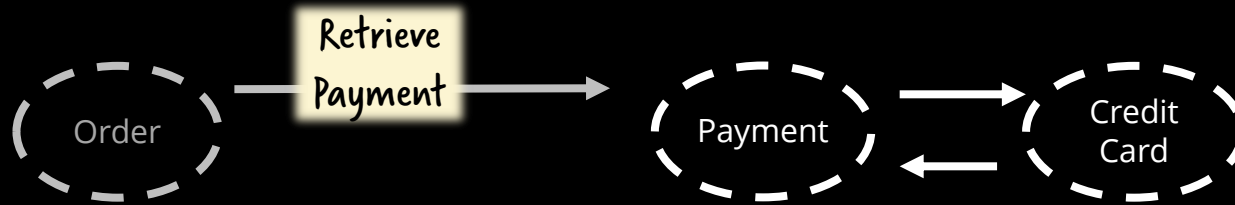
Long
Running



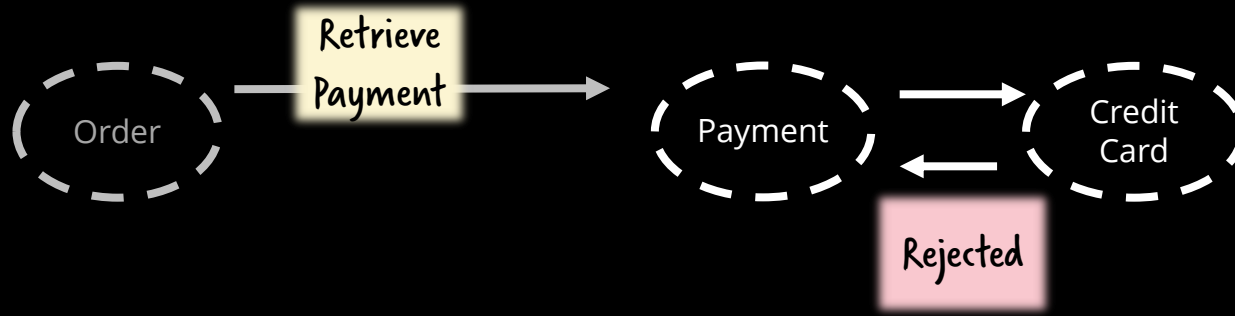
Technical



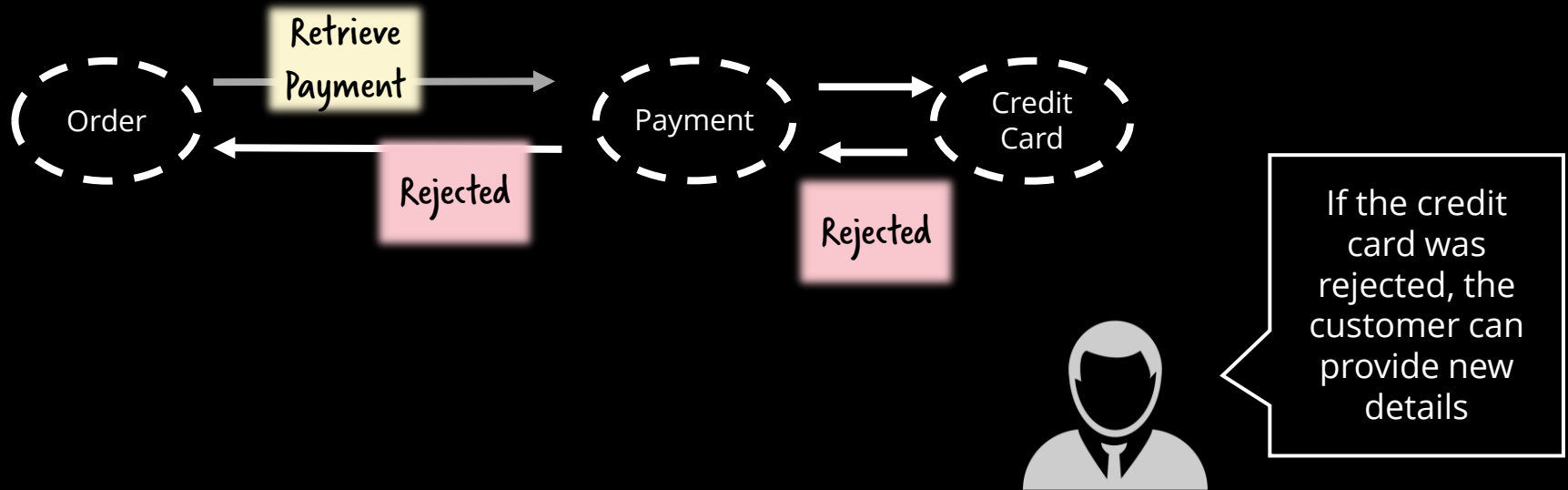
Example



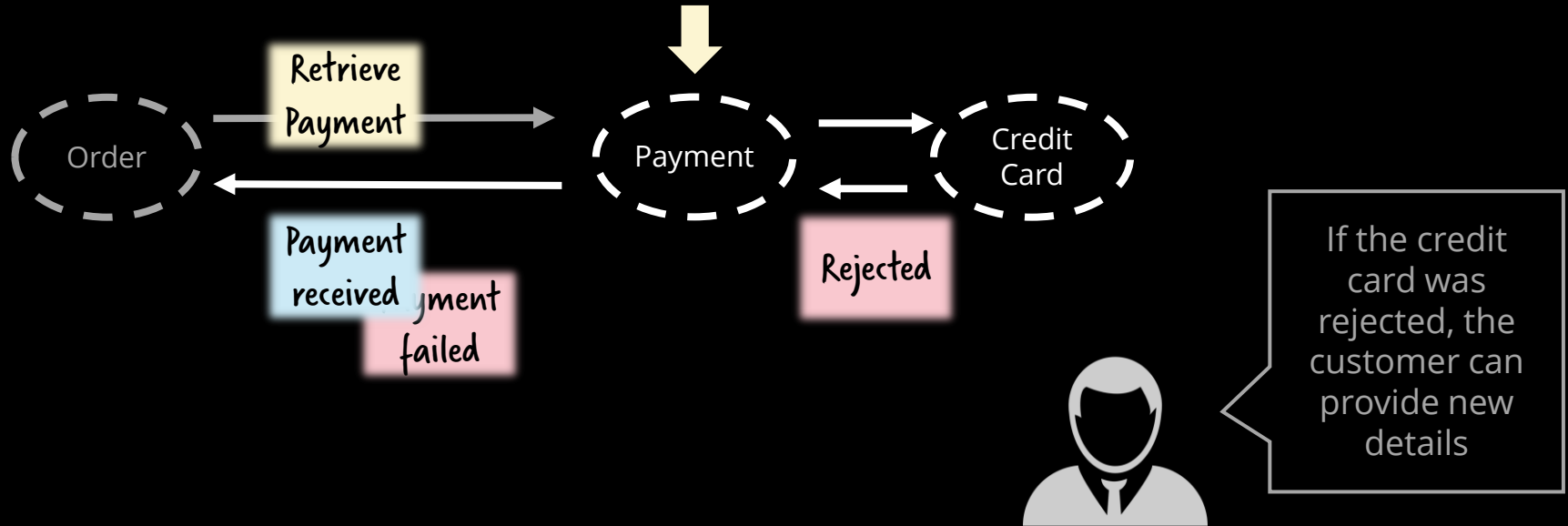
Example



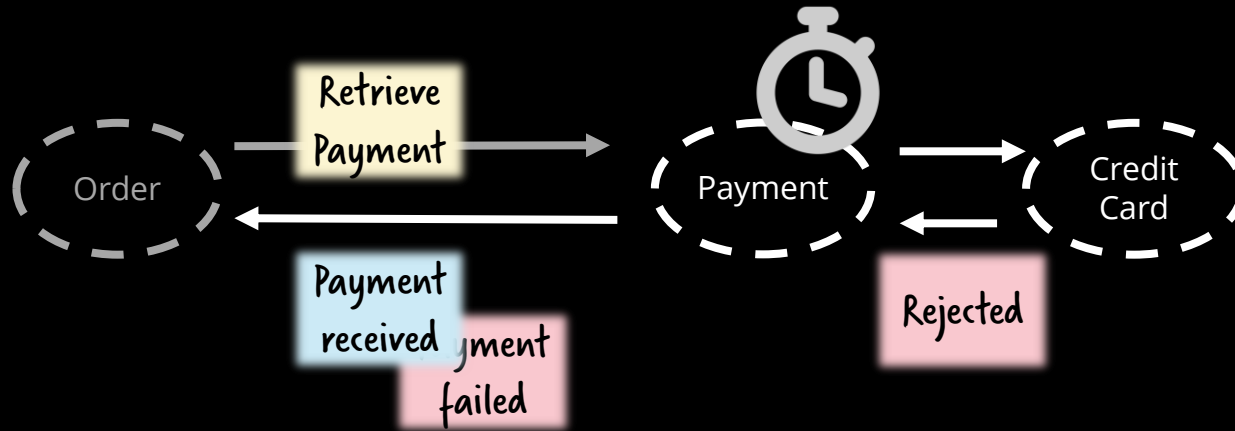
Example



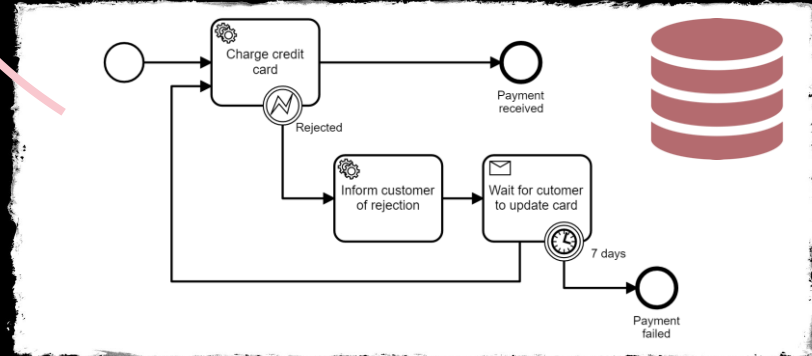
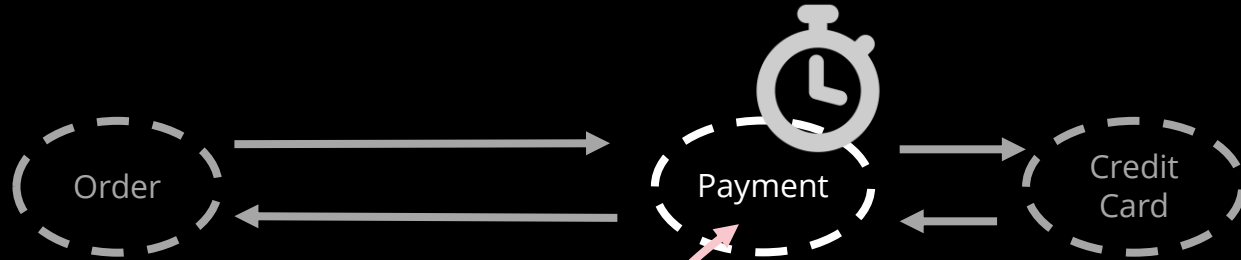
Who is responsible?



Long running services



Long running services





Process
Automation

Solve Problems



Long
Running



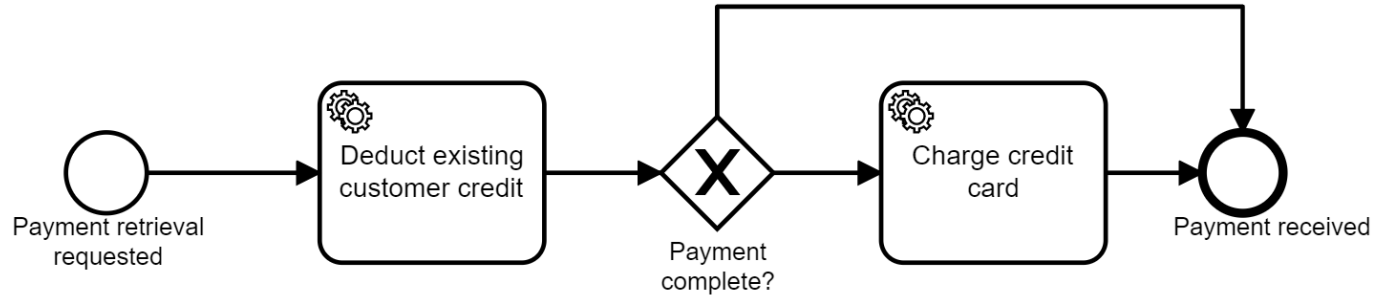
Technical



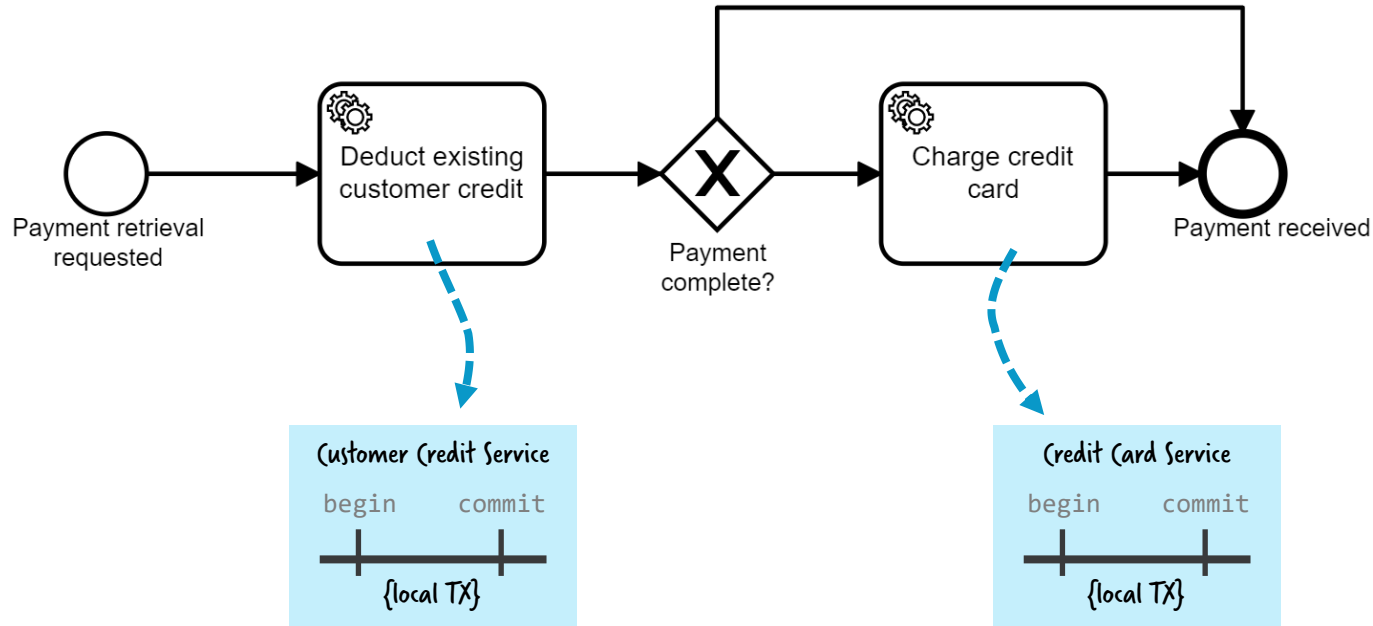
Business



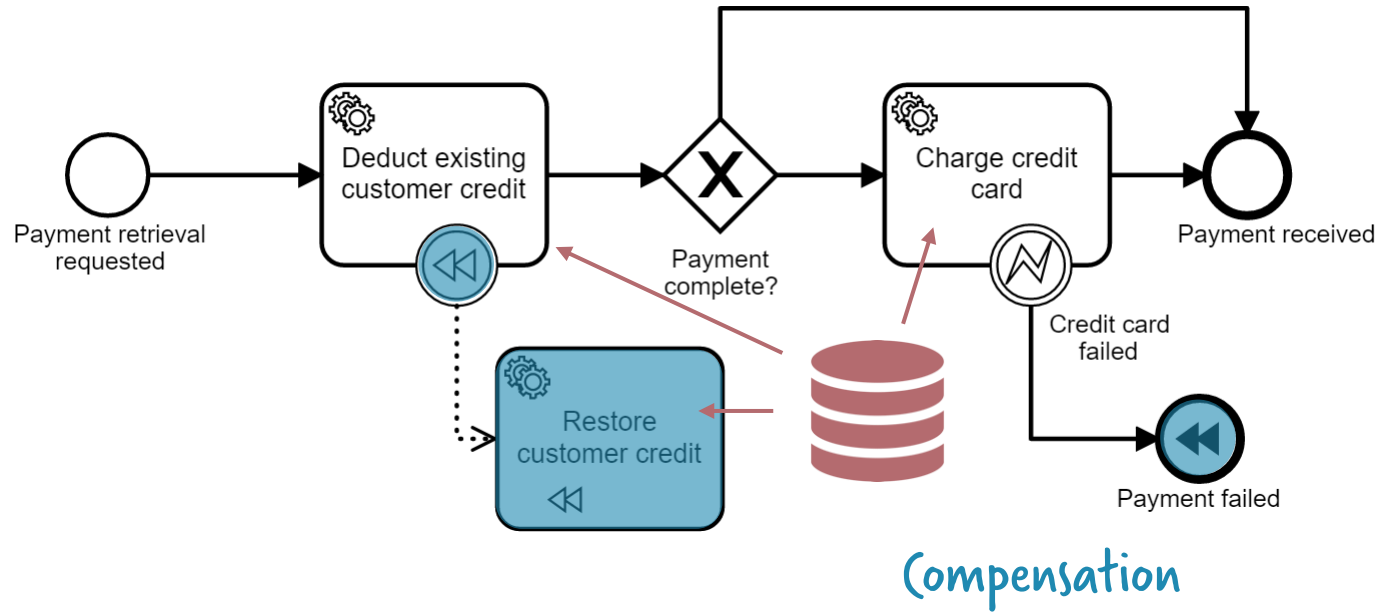
Extending Payment options



Extending Payment options



Distributed transactions using compensation *



* aka Saga pattern



Process
Automation

Solve Problems



Long
Running



Technical



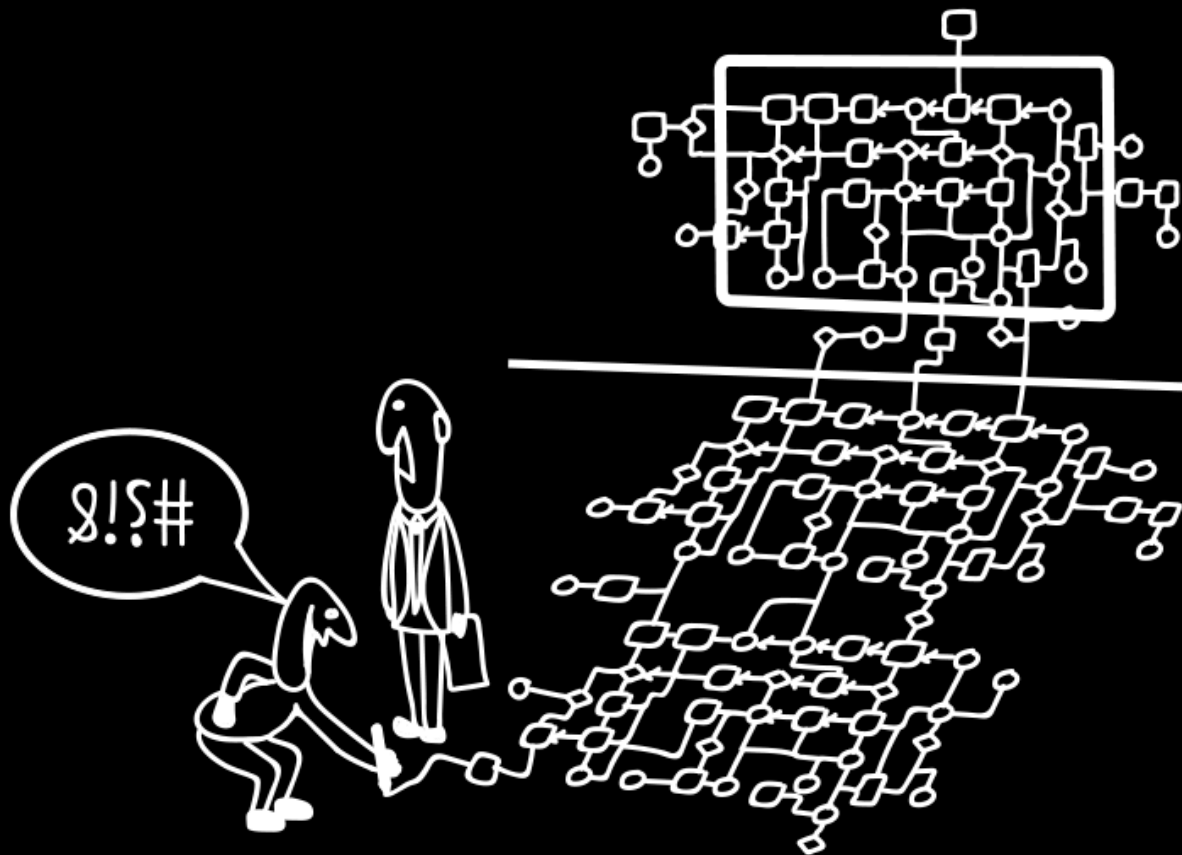
Business



Transactions,
Saga



Graphical models?





Clemens Vasters
Architect at Microsoft



Clemens Vasters
@clemensvasters

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- 📁 News

Sagas

Today has been a really busy day in some parts of the "Tuttnansen" department. In the end, there are a few frameworks for "Saga" out there that use the term "Saga" for some framework implementation of a state machine or workflow. Thanks to that, not every "Saga" is a Saga, but a workflow management pattern.

Sagas come out of the realization that particularly long-lived transactions (originally even just in the database), but also for distributed transactions across location and/or trust boundaries can't easily be handled using the distributed 2PC model with 2-Phase commit and holding back for the duration of the work instead. A Saga splits up the individual transactions whose effects can be completely reversed after work has been performed and admitted.



The picture shows a simple Saga. If you book a travel itinerary you want a car and a hotel and a flight. If you can't get all of them, it's probably not worth going. It's also very certain that you can't undo all of those previous things a distributed 2PC transaction. Instead, you have an activity for booking rental cars that knows both how to perform a reservation and also how to cancel it and one for a hotel and one for flights.

The activities are grouped in a composite job (routing slip) that's handed along the activity chain. If you want, you can design the routing slip items so that they can only be understood and manipulated by the individual modules. When an activity completes, it also a means of the completion to the routing slip along with information on where the compensating operation can be resolved (e.g. via a Queue). When an activity fails, it drops up locally and then sends the routing slip backwards to the last.



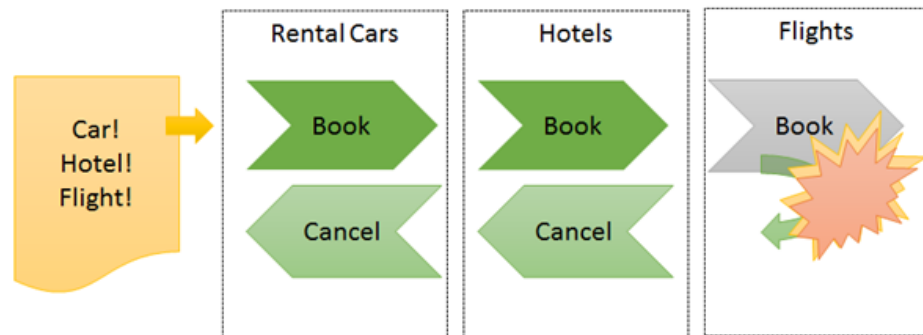
Clemens Vasters
@clemensvasters

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- 📁 News

```

1  // ...
2  get { return new Saga("Saga", new SagaItem("Saga")); }
3  }
4  }
5  }
6  }
7  }
8  }
9  }
10 }
11 }
12 }
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99 }
100 }

```



<http://vastars.com/archive/Sagas.html>

```

1  // ...
2  The activities each implement a reservation step and an undo step. Here's the one for cars:
3  }
4  }
5  }
6  }
7  }
8  }
9  }
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100 }

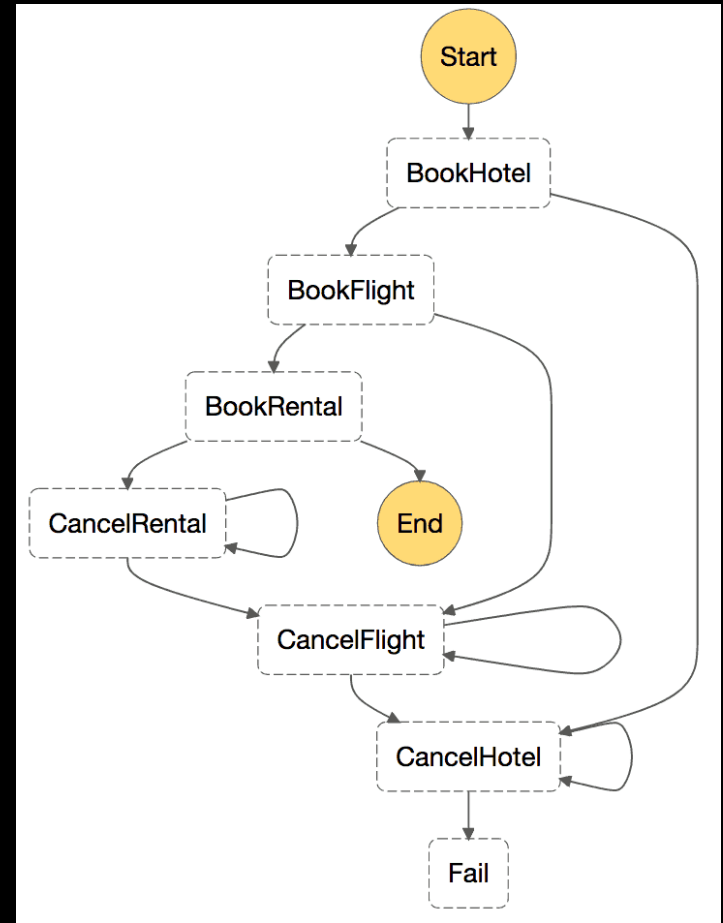
```

```

1  // ...
2  The last work and making the decision is encapsulated in the ActivityJob, which is a ProcessJob.
3  }
4  }
5  }
6  }
7  }
8  }
9  }
10 }
11 }
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100 }

```


Saga Using Step Functions



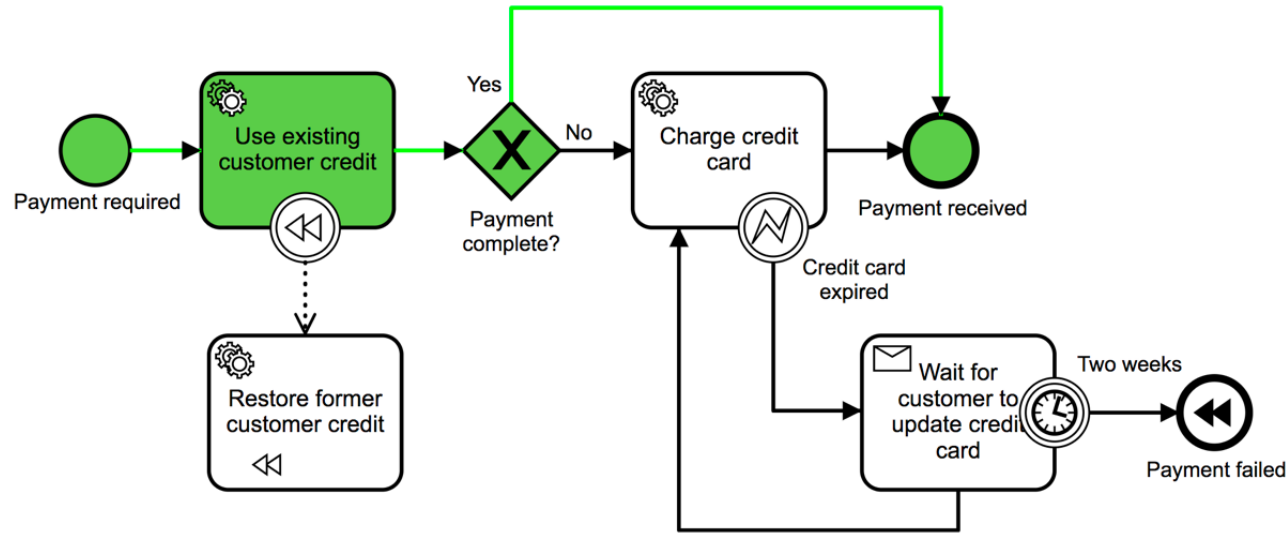
Biz Dev ops

The image features the text "Biz Dev ops" in a white, handwritten-style font on a black background. Below the word "Dev", there is a white bracket that spans the width of "Dev" and extends slightly to the left and right. Below this bracket, the words "improve" and "communication" are written in a smaller, lowercase, handwritten-style font, stacked vertically. A second, identical bracket and text arrangement are positioned below the word "ops".

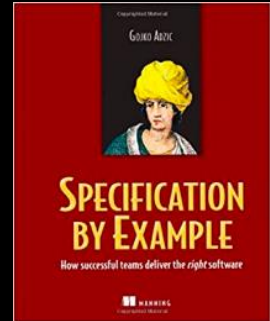
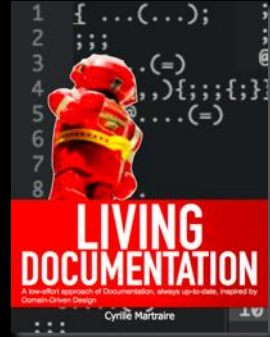
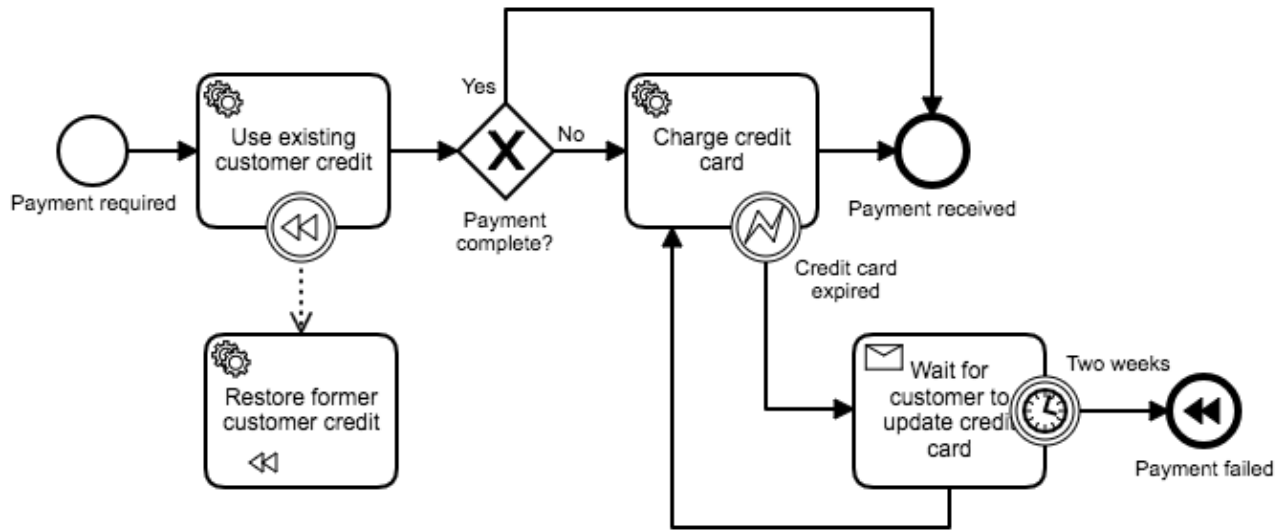
improve
communication

improve
communication

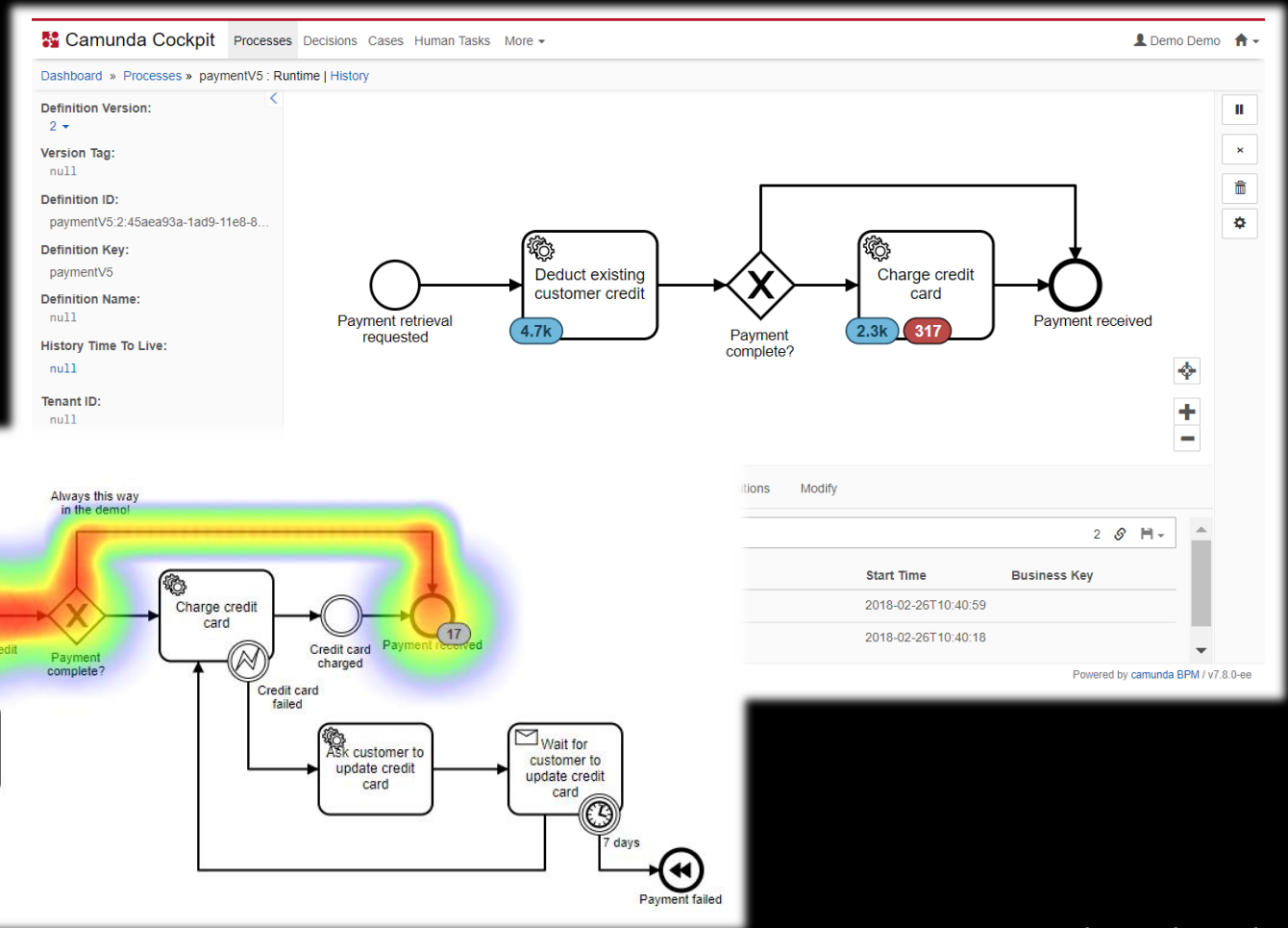
Visual HTML reports for test cases



Living documentation for long-running behaviour



operations



Biz Dev ops





Process
Automation

Solve Problems



Long
Running



Technical



Business



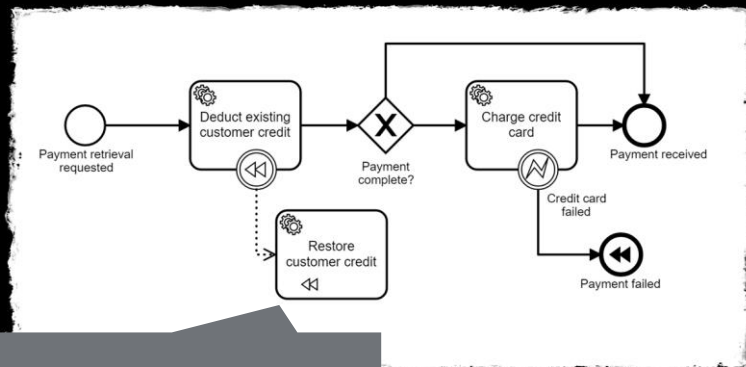
Transactions,
Saga



Visibility



„But I don't care about technical problems!“



Is this reaction technical?

Would Jeff Bezos say that?



Process
Automation

Solve Problems



Long
Running



Technical



Business



Transactions,
Saga



Visibility



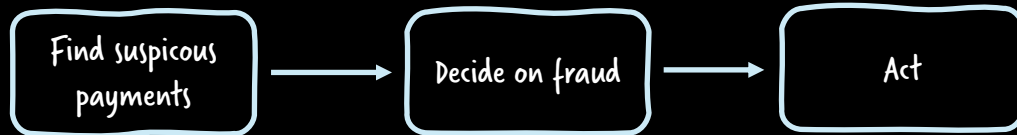
Business Agility

Time-to-value

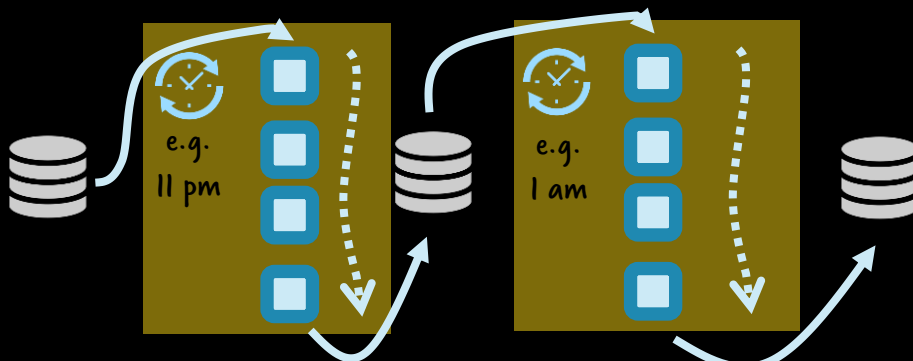


Customer
Experience

Facilitate Business outcome



Batch



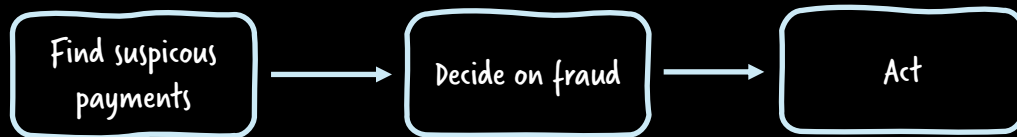
Batches are time delayed
(high latency)

Batches are orthogonal
to the real workflow

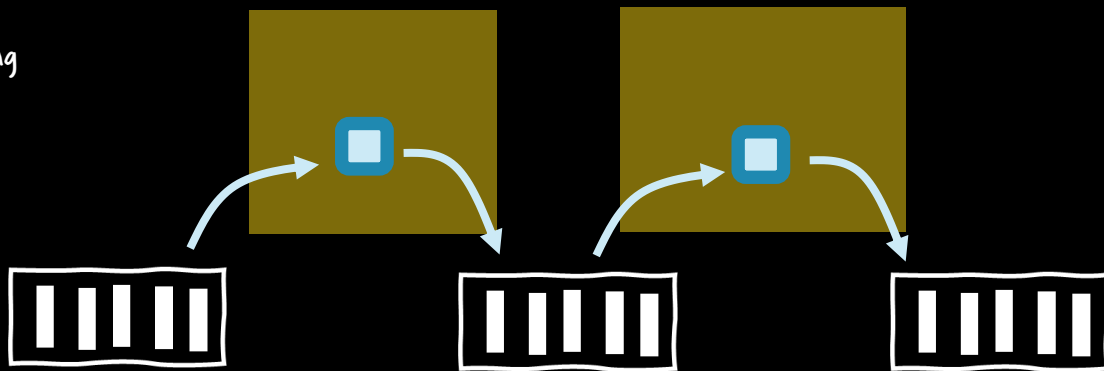
Workflow



Items flow along the
workflow as they come in



Streaming



Streaming adds real-life capabilities and removes latency

But Stream processors are still orthogonal to the real workflow

Workflow

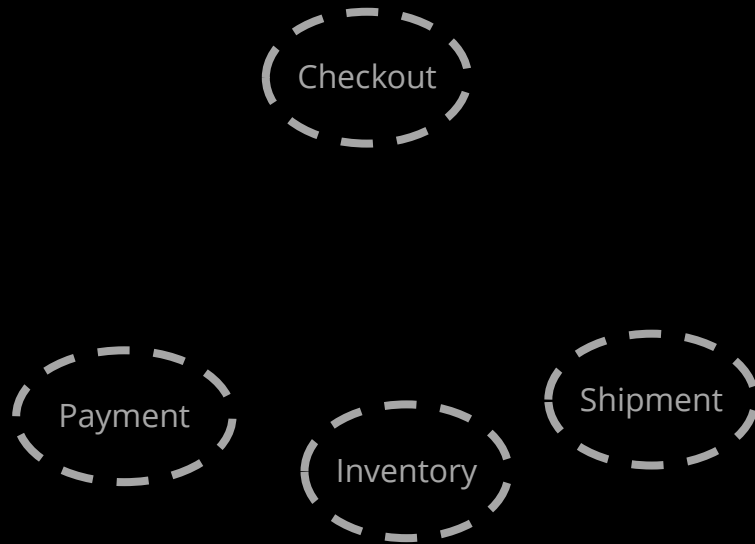


Items flow along the workflow as they come in

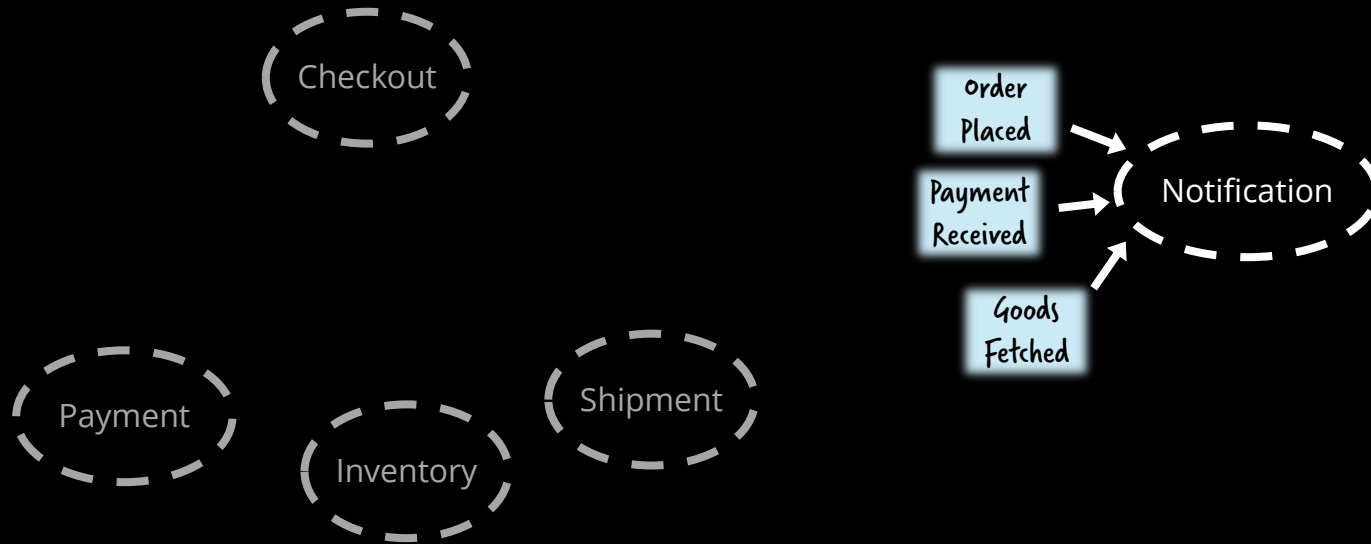
Let's talk about
Event-Driven Architecture



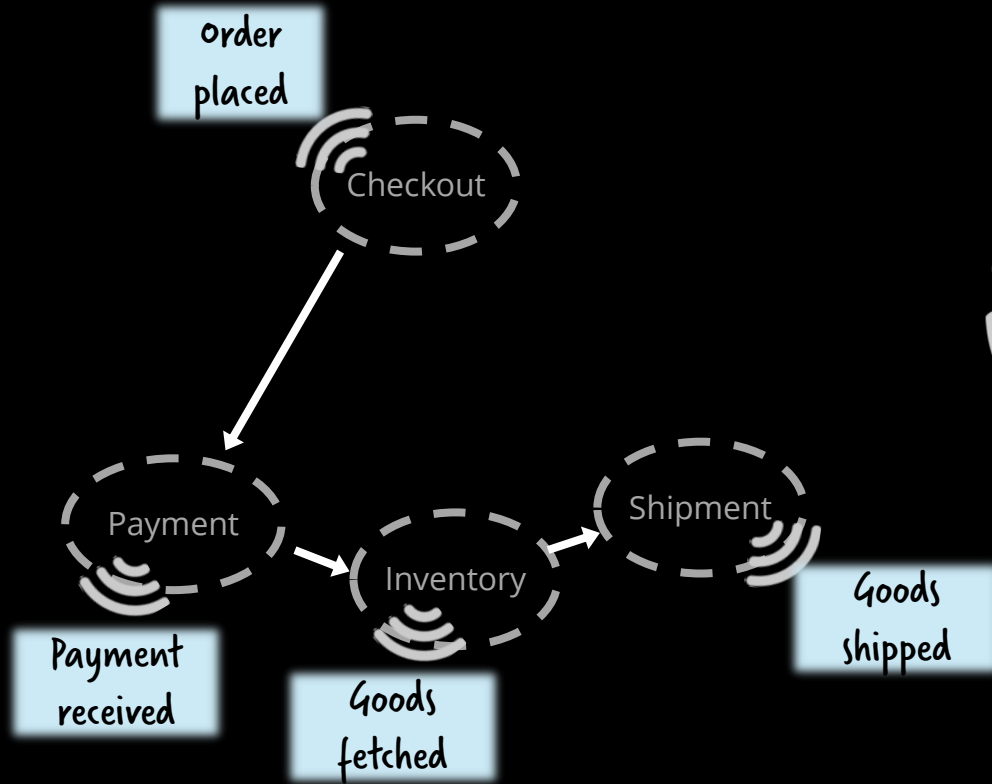
Example



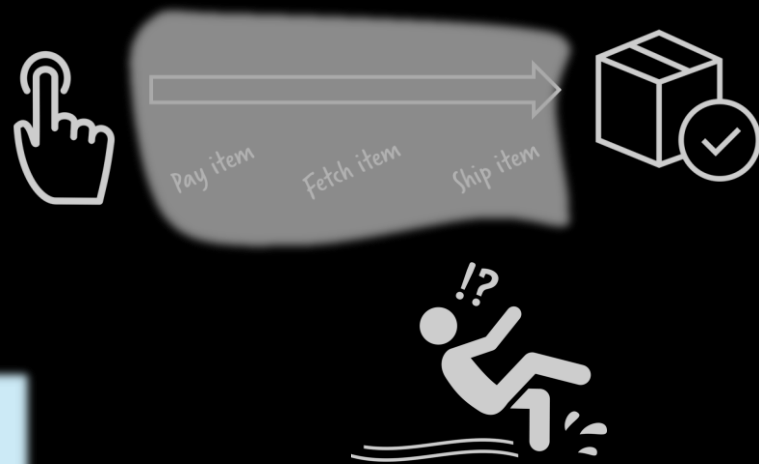
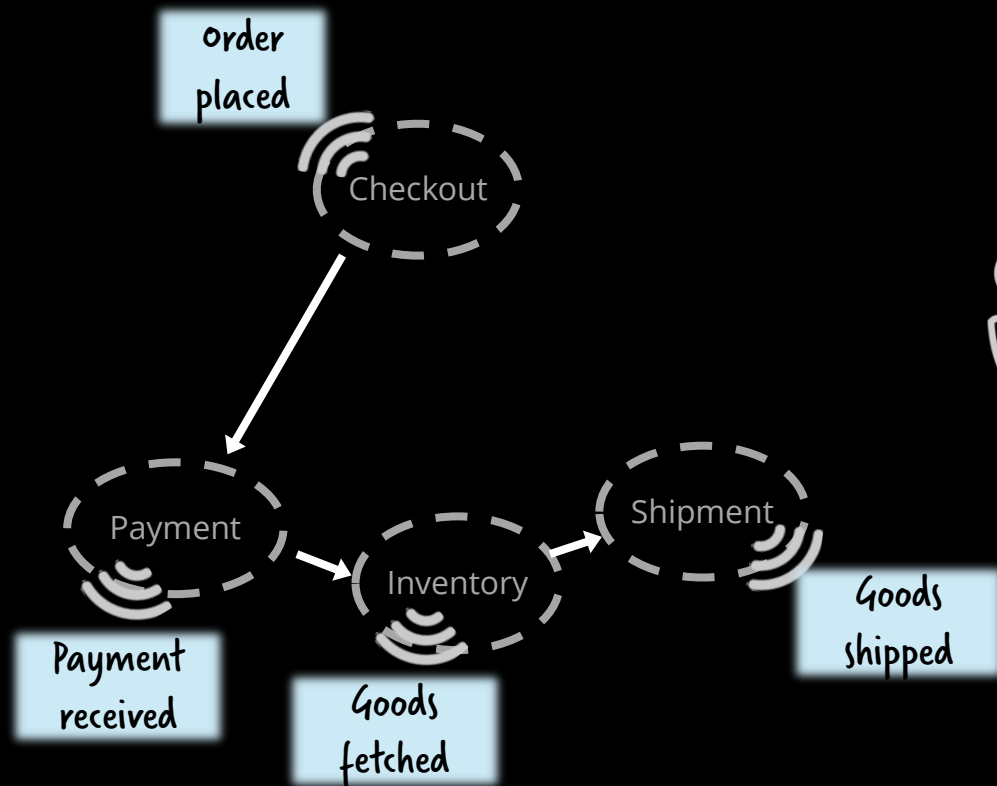
Event-driven



Peer-to-peer event chains



Peer-to-peer event chains





The danger is that it's very easy to make nicely decoupled systems with event notification, without realizing that you're losing sight of that larger-scale flow, and thus set yourself up for trouble in future years.



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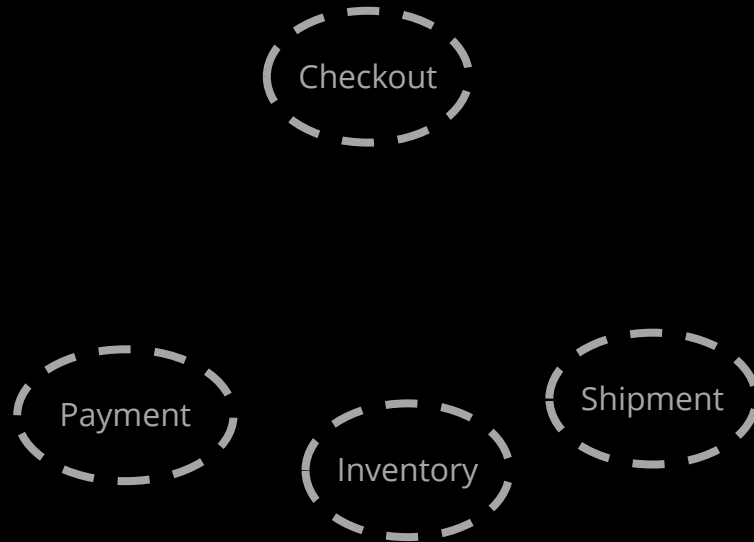


The danger is that it's very easy to make nicely decoupled systems with event notification, without realizing that you're losing sight of that larger-scale flow, and thus set yourself up for trouble in future years.

We were suffering from
Pinball machine Architecture



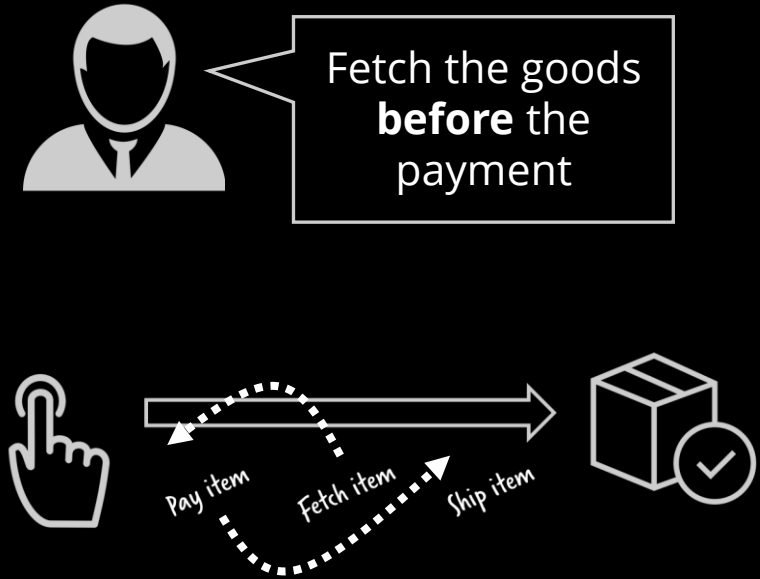
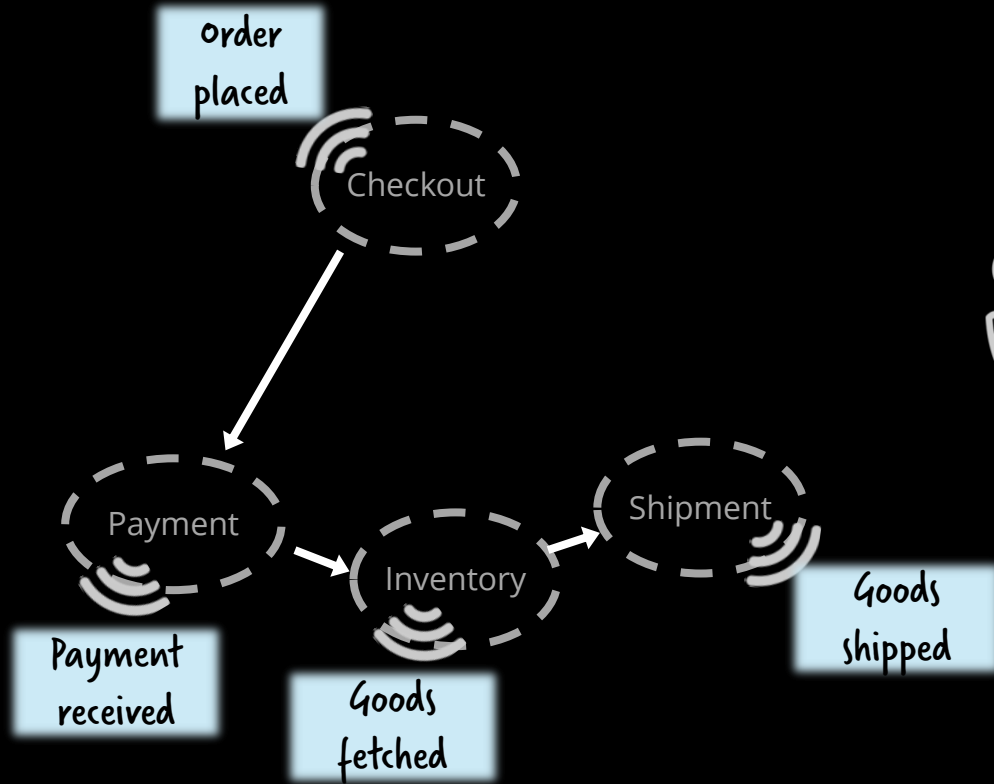
Pinball Machine Architecture



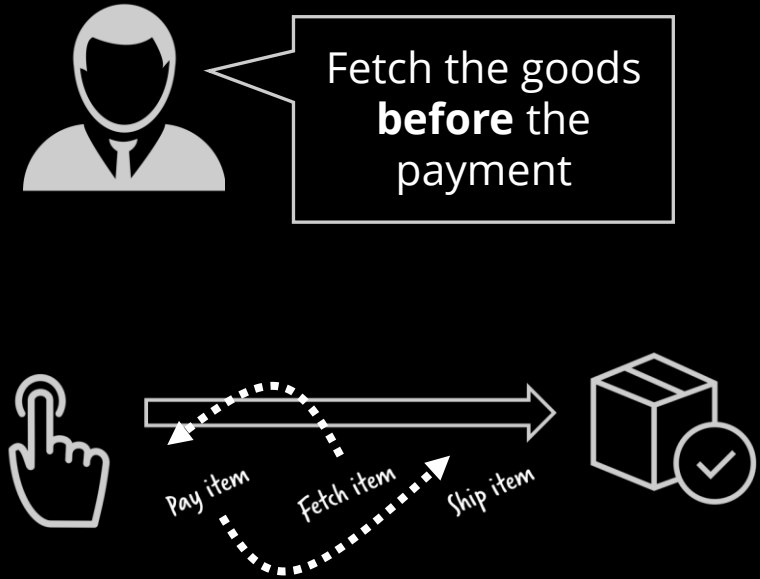
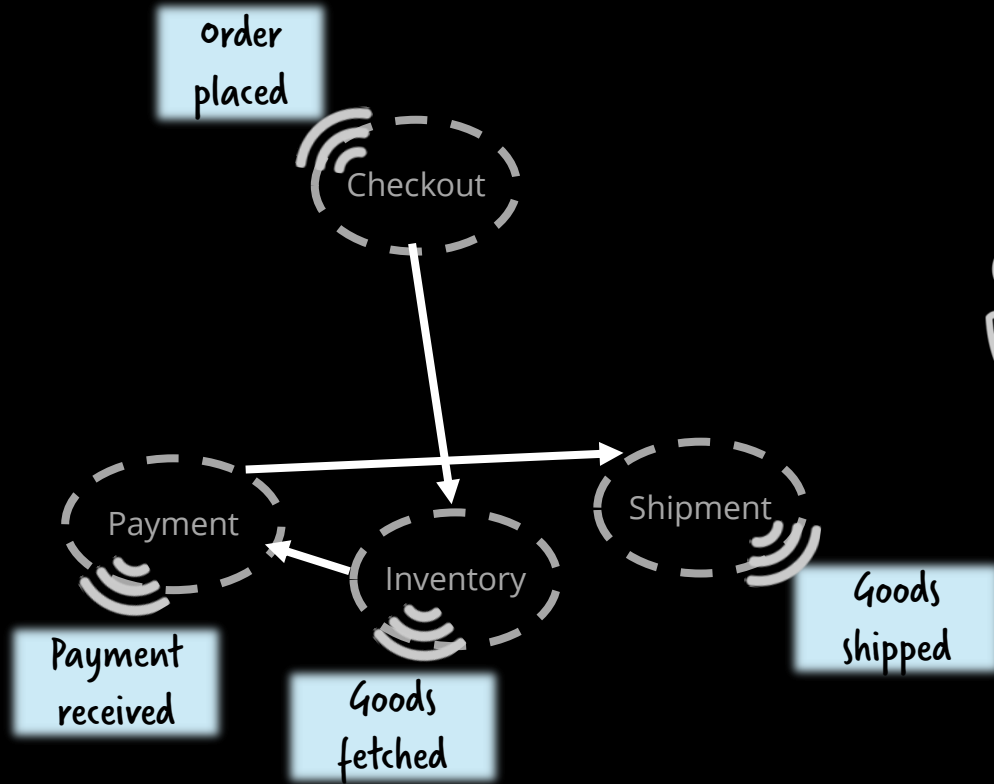
Notifica

„What the hell
just
happened?“

Peer-to-peer event chains

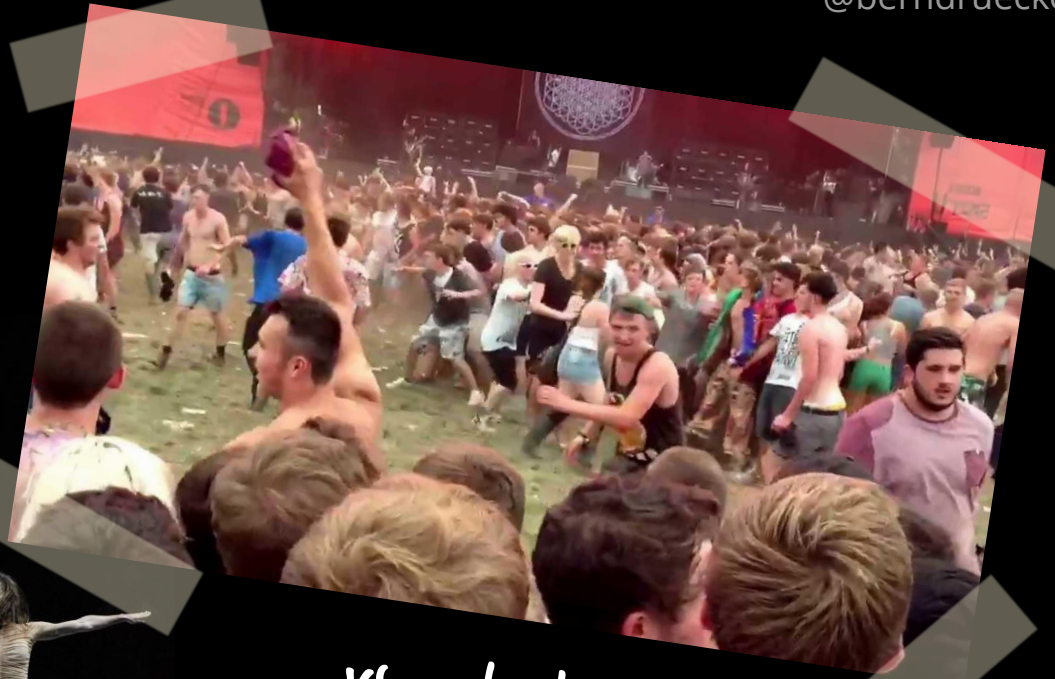


Peer-to-peer event chains



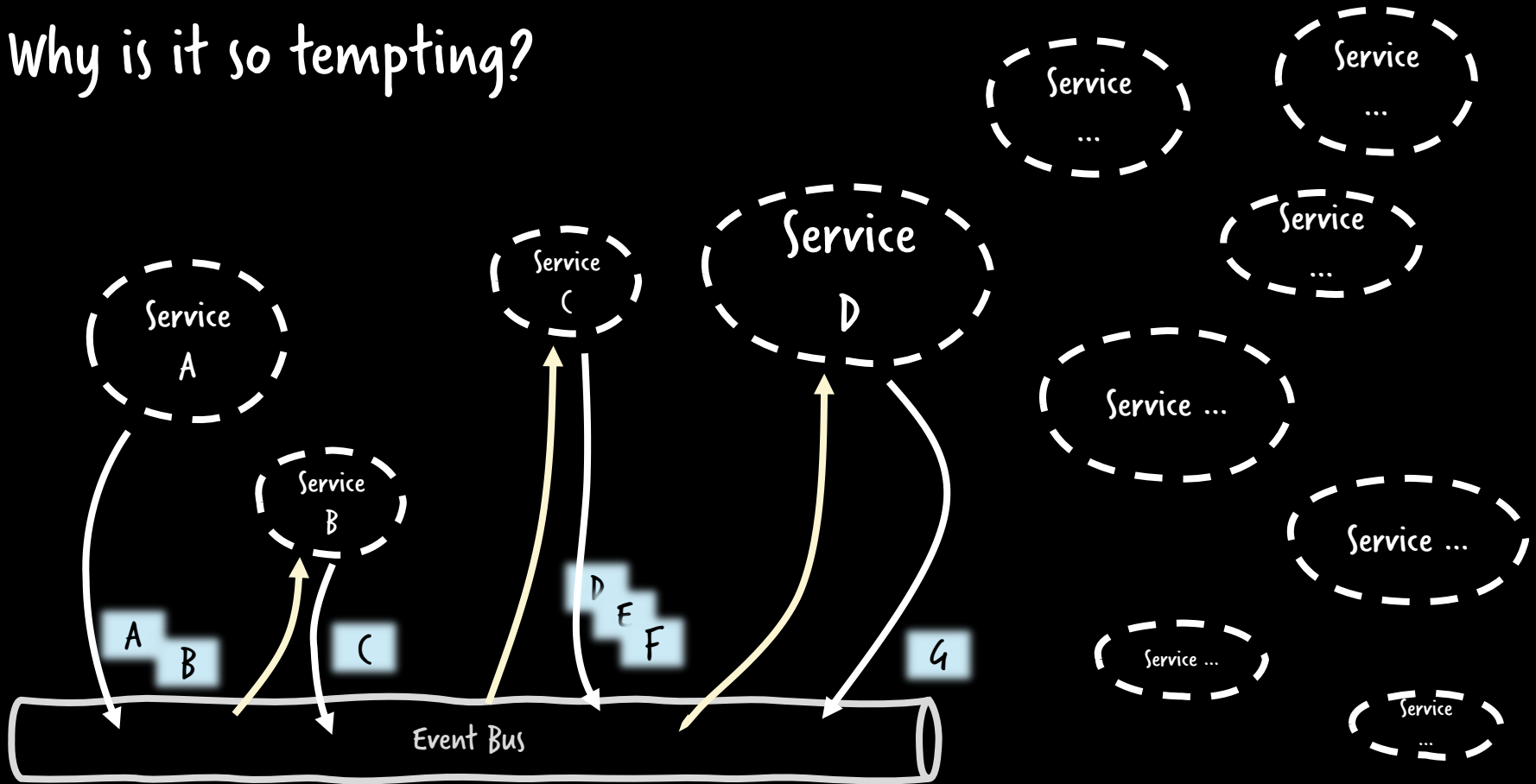
Choreography

What we wanted

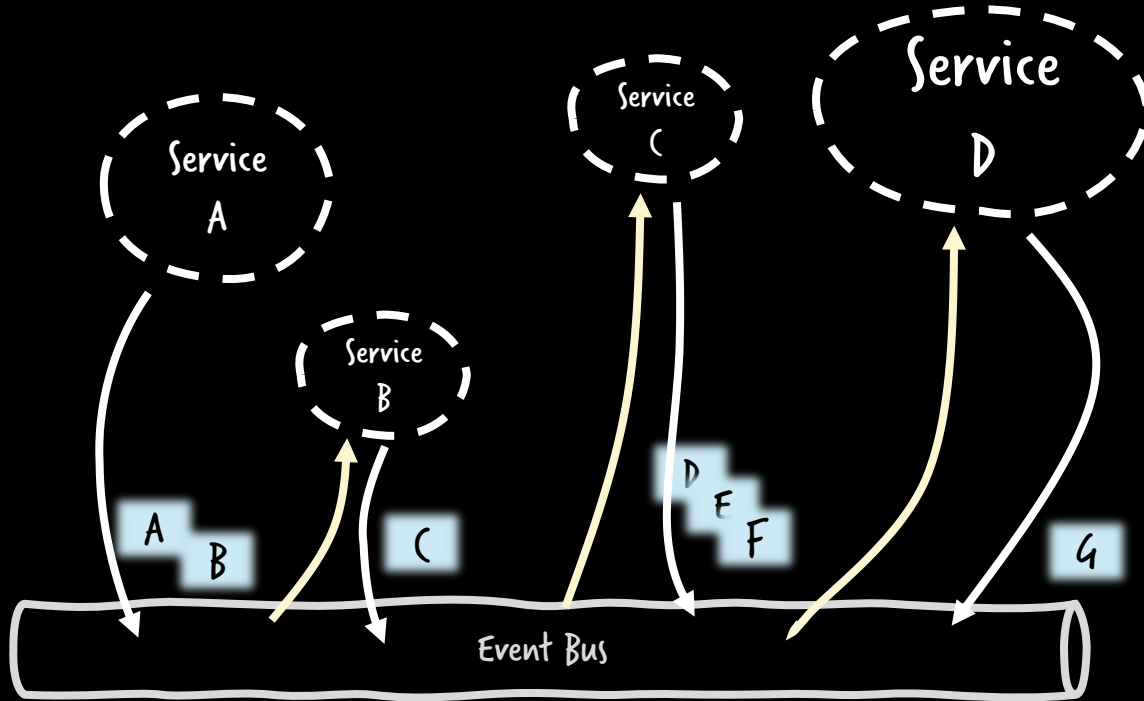


vs. what we got

Why is it so tempting?



Why is it so tempting?



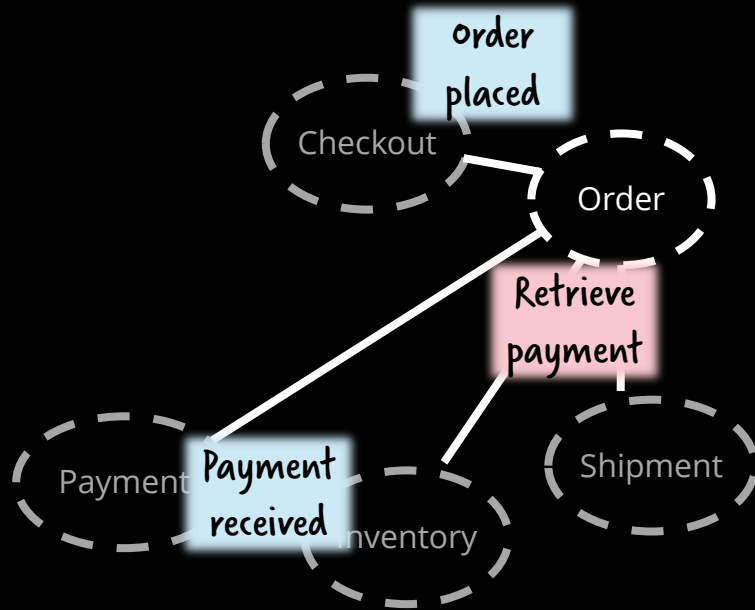
Adding is easy!

You can „buy“ a shorter initial time-to-value by choreography.

It yields in technical debt.

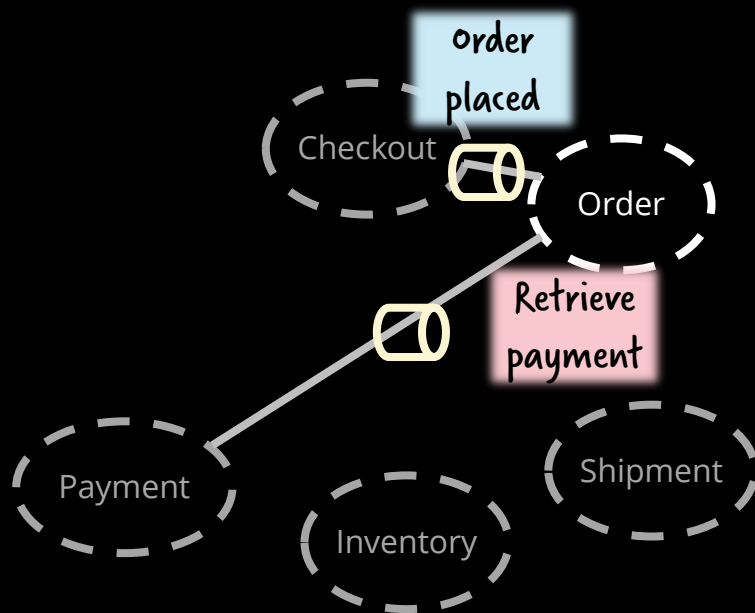


orchestration



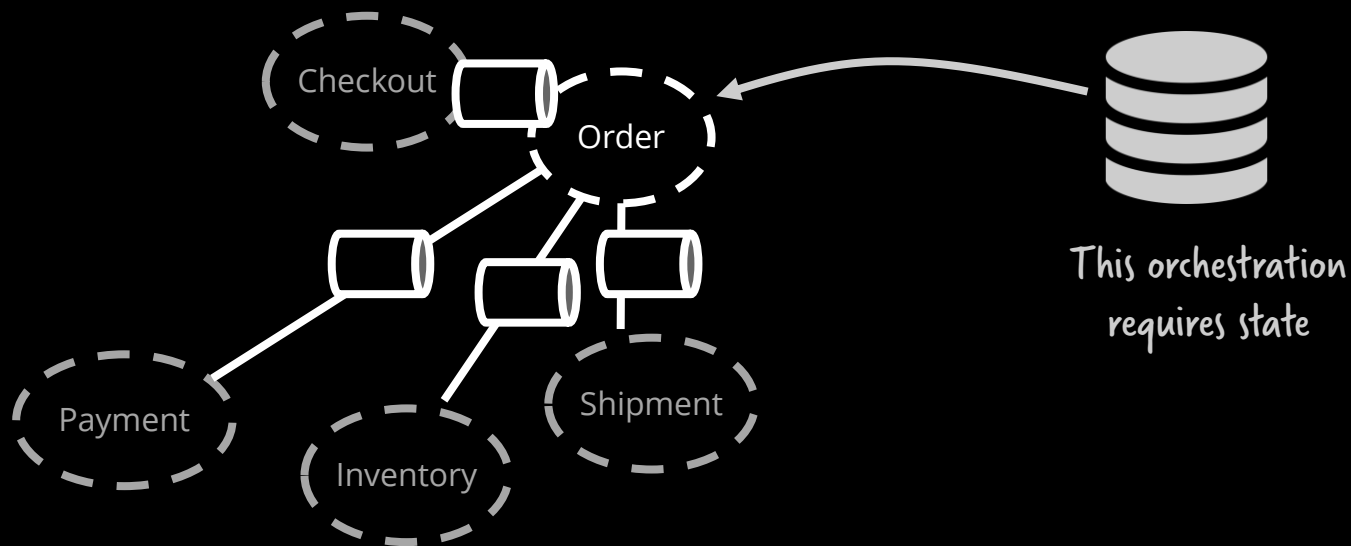
Decide about
responsibility!

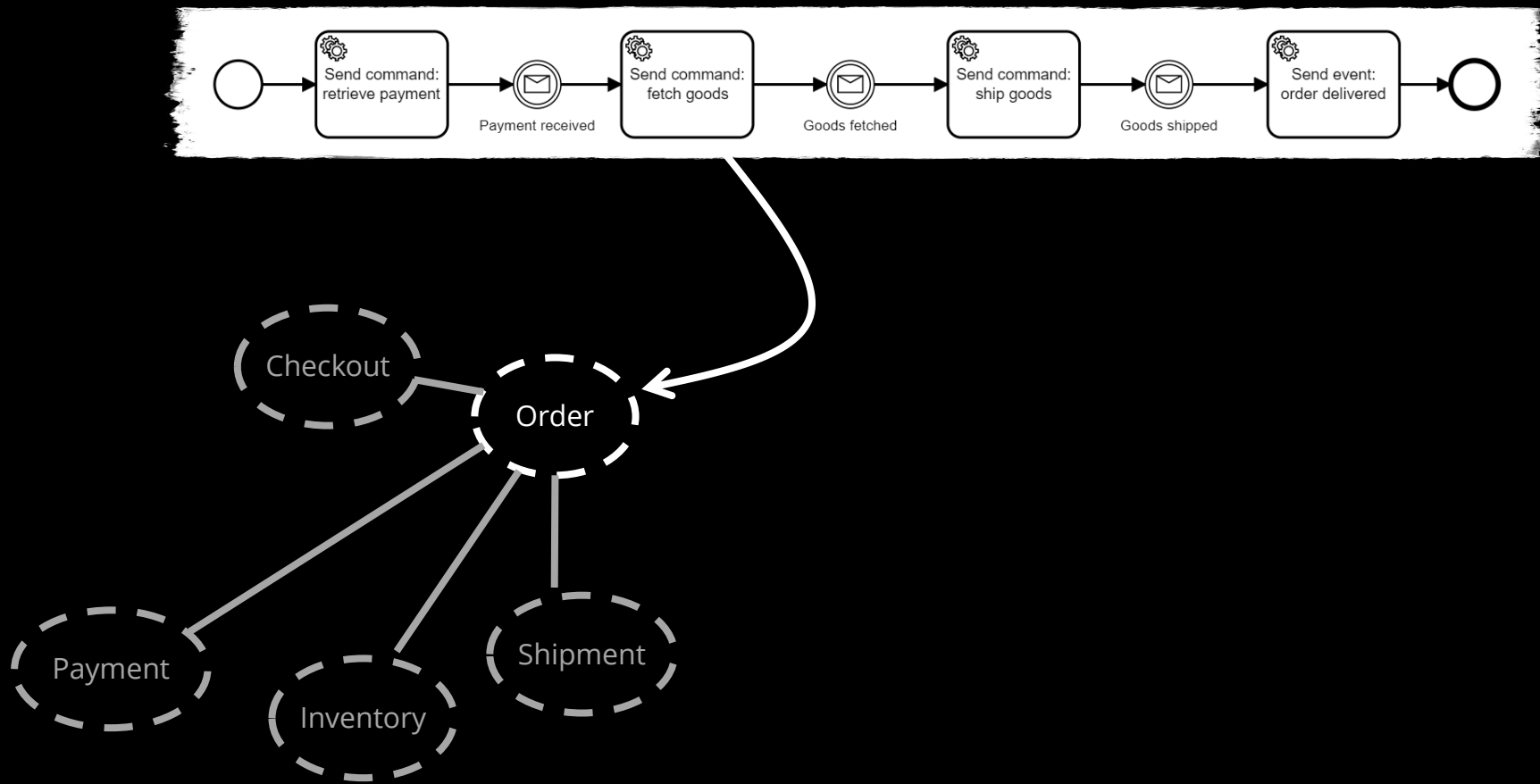
orchestration



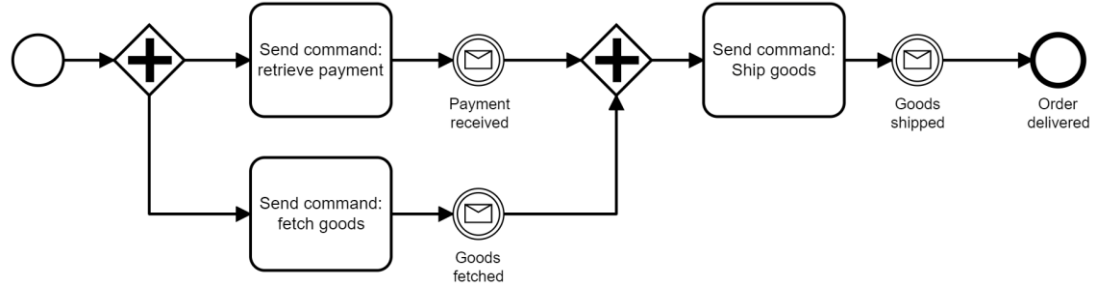
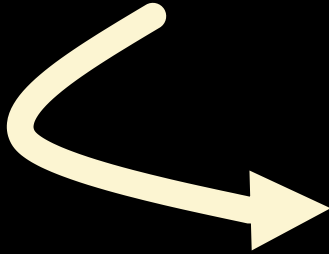
It can still be messaging!

Stateful orchestration

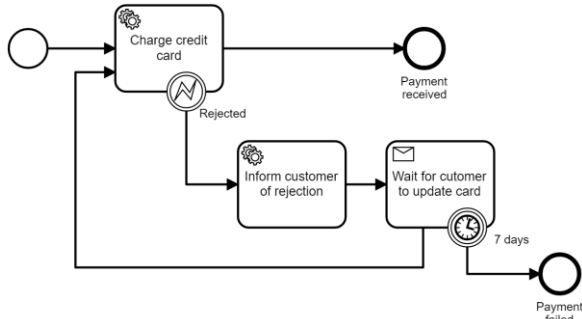
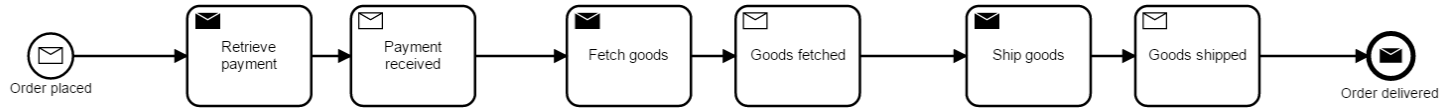




Now it is easy to change the process flow

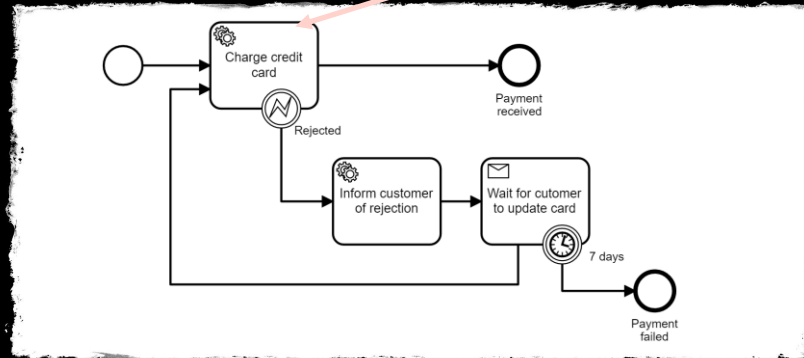


Processes are domain logic that live inside boundaries



orchestrate anything

This might be a microservice,
an RPA bot,
a human,
a device,
a function or any other software component





Process
Automation

Solve Problems



Long
Running



Technical



Business



Transactions,
Saga



Visibility

orchestrate Anything



Facilitate Business outcome



Business Agility

Time-to-value



Customer
Experience



Process
Automation

Solve Problems



Long
Running



Technical



Business



Transactions,
Saga



Visibility

orchestrate Anything



Facilitate Business outcome



Business Agility

Time-to-value



Customer
Experience

Use the right tooling

Developer friendly



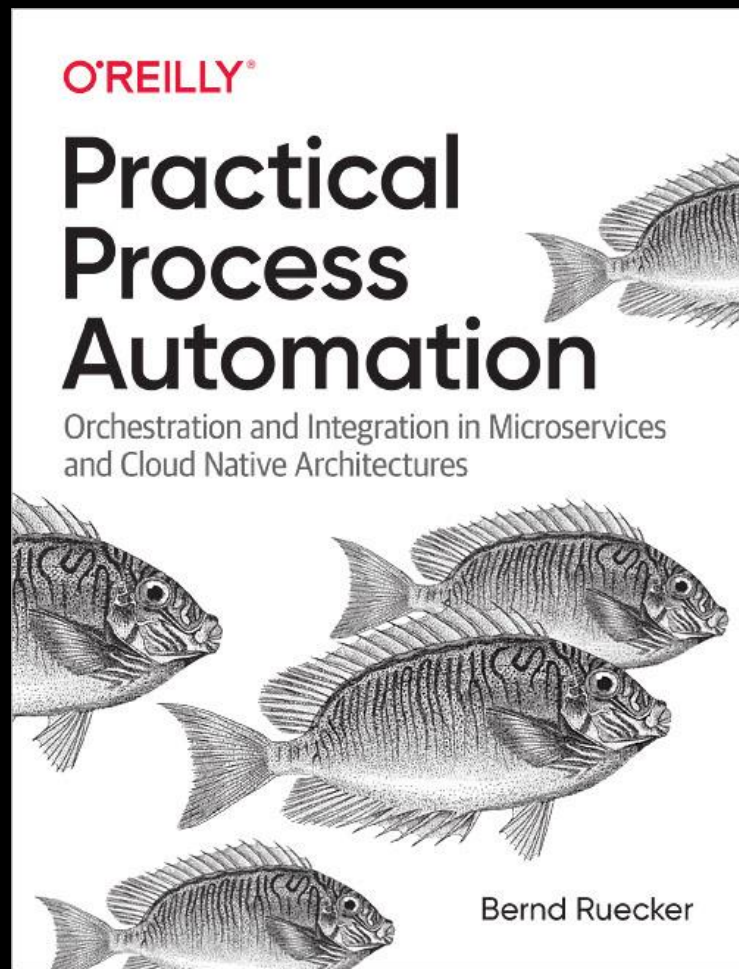
Business IT Collaboration

open Architecture



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Thank you!

