

BPMNext 2019

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Bonita - A platform to create digital customer and employee experiences



Built enterprise-grade apps connecting UI's and Business Processes for better UX's.

- Custom UIs
- Business Data
- Processes



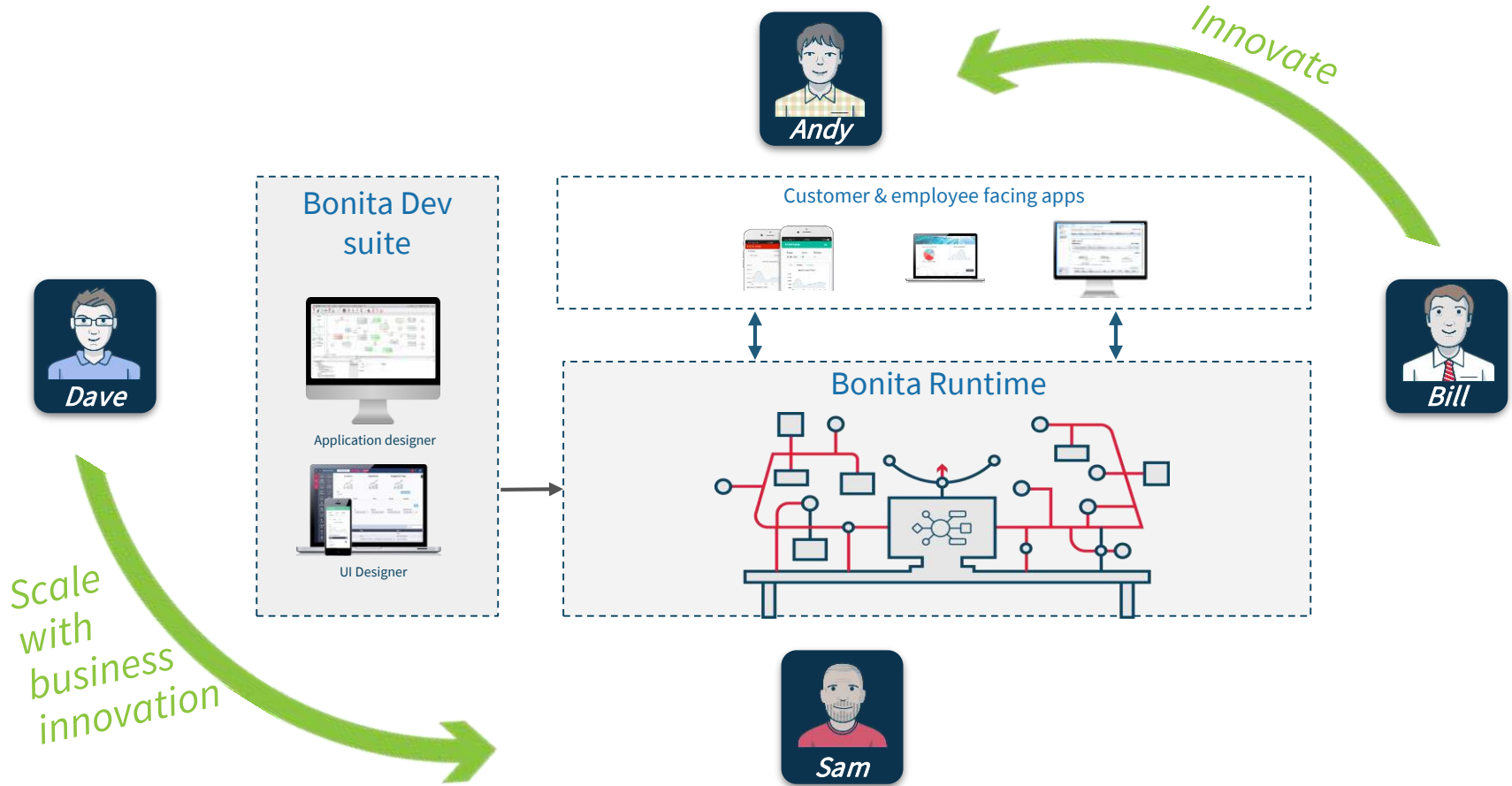
Iterative development and intelligent continuous improvement of apps - on-premise and in the cloud

- Live update of artifacts
- Forms
- Organization, ..

Multi-layer architecture of Bonita Living Apps



Bonita Platform



Why scalability matters ?



Goal



Ensure the quality of service for end-users



Exemples : Reduce time of execution, manage more tasks at the same time, ...

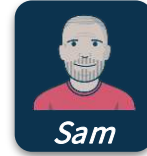
Scalability criterias for a BPM platform

- should be transparent to end-users
- should be automatic and dynamic
- should be under cost control
- should be generic to all processes types

Scalability criterias for a BPM platform

⇒ Serve our personas

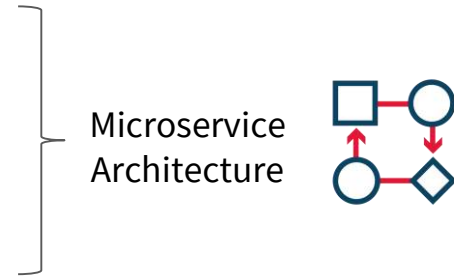
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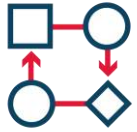


Scalability criterias for a BPM platform

⇒ technologies to meet criterias

- should be transparent to end-users
- should be automatic and dynamic
- should be under cost control
- should be generic to all processes types





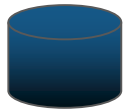
Microservice architecture

MONOLITHIC

UI

Business
Logic

Data
Access



VS

MICROSERVICES

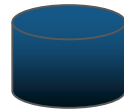
UI

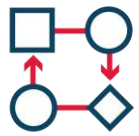
Microservice

Microservice

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Microservice

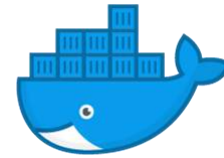




What does microservice means for a BPM platform like Bonita ?

Componentization: split the components to ensure local scalability

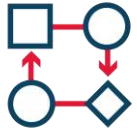
→ Use container technology like *Docker*



Ensure the deployment automation

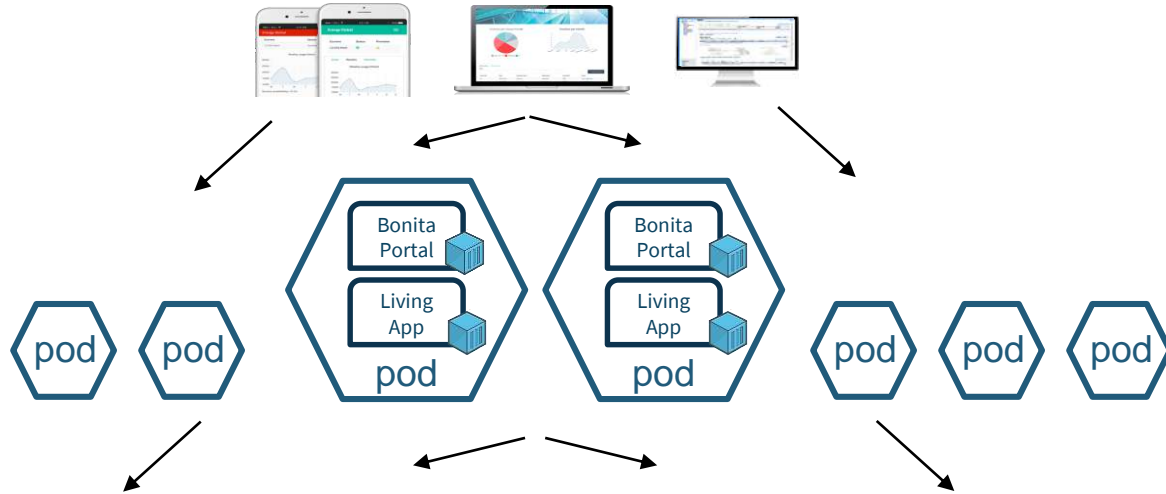
→ Use orchestration tool like *Kubernetes*



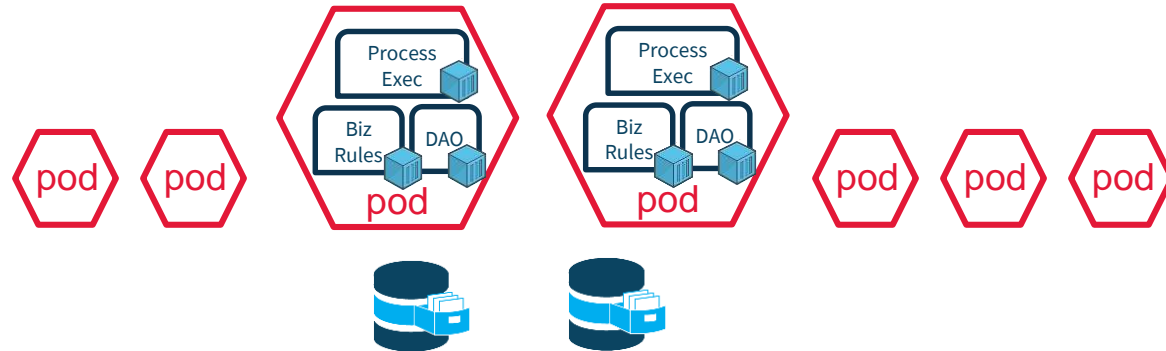


Bonita componentized architecture

Portal



Engine

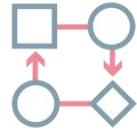


Scalability criterias for a BPM platform

⇒ use new technologies

- should be transparent to end-users
- should be automatic and dynamic
- should be under cost control
- should be generic to all processes types

Microservice
Architecture



serverless





Bonita platform extensibility

A Bonita application is composed of plenty of custom code :

- Connector on activities
- Operation scripts
- Business Rules
- Rest API extension
- ...



⇒ Unpredictable impact on the platform load !



What is the pain?

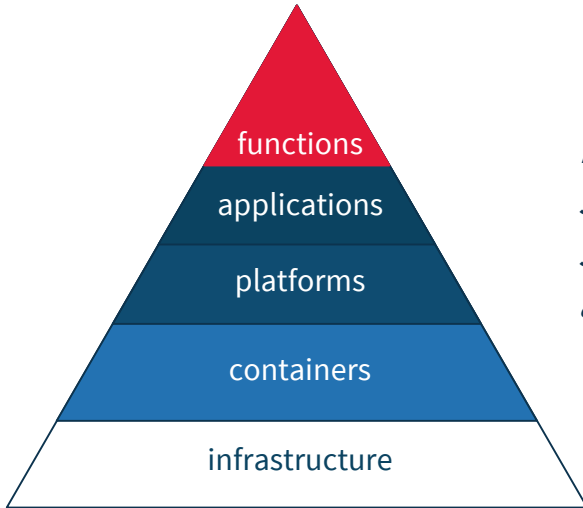
Being extensible, means NO guaranty on what will be executed

- ⊗ No way to know resources consumption
- ⊗ hard to isolate
- ⊗ limited parallelism

⇒ serverless approach could solve these pains



What is serverless ?

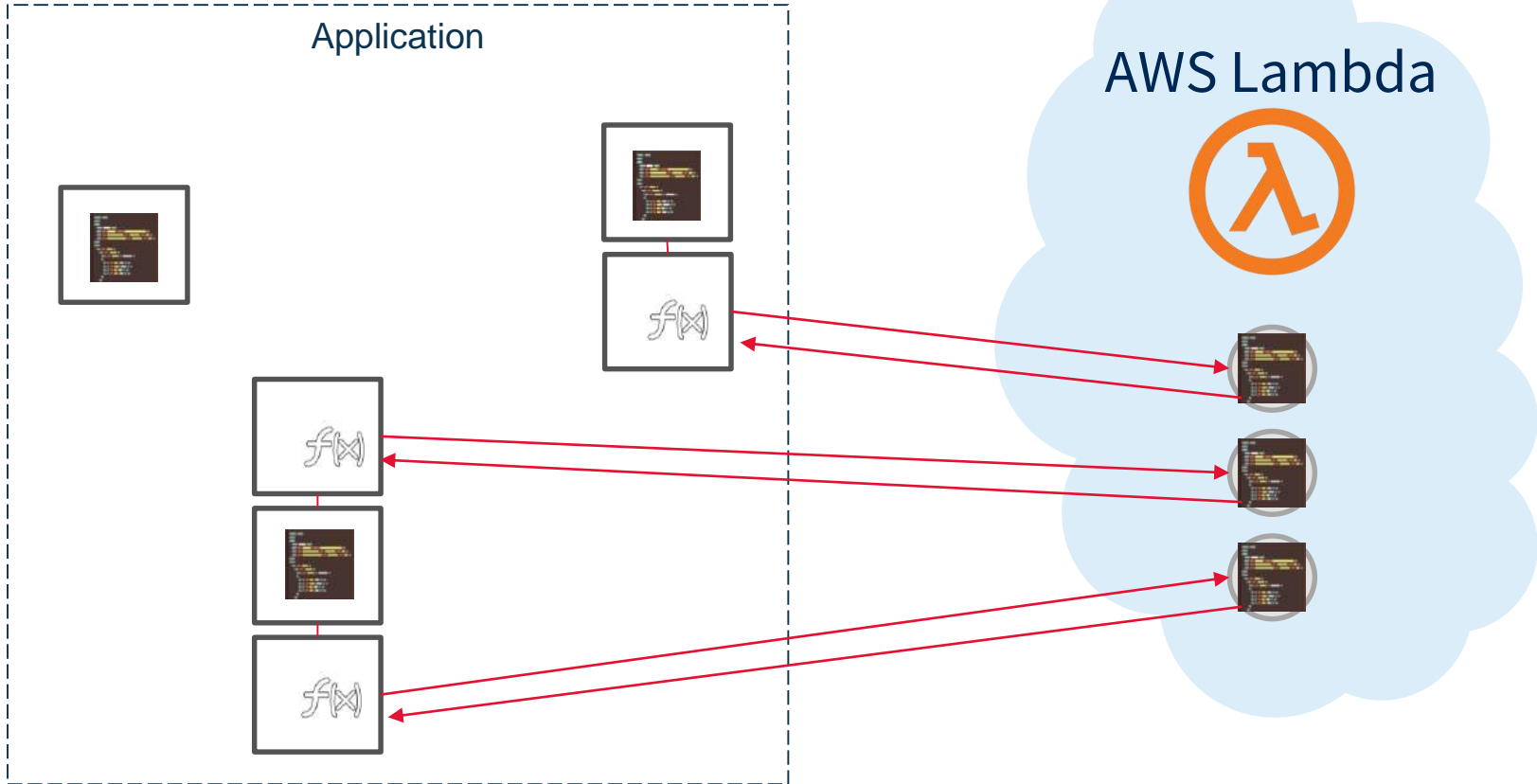


“An approach to software development that abstracts developers from underlying cloud infrastructure. Serverless architecture supports the deployment of arbitrary business logic, decouples state from underlying compute, automatically scales on demand, and supports event-driven communication.”

Forrester - Emerging Technology Spotlight: Serverless Computing - January 16, 2019



Function as a Service





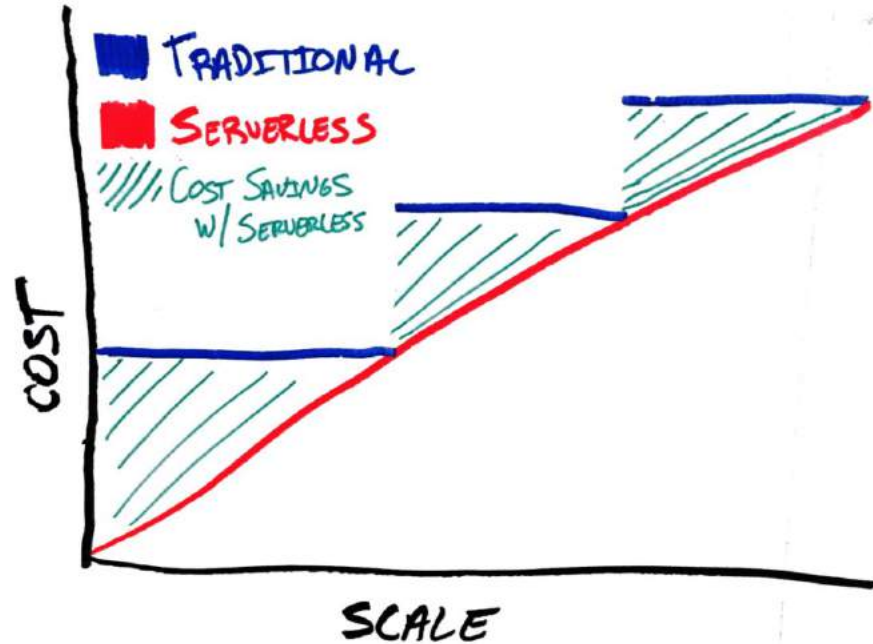
Serverless approach pros and cons

Pros

- No idle servers
- cost is linear (pay per use)
- Isolation
- parallelism

Cons

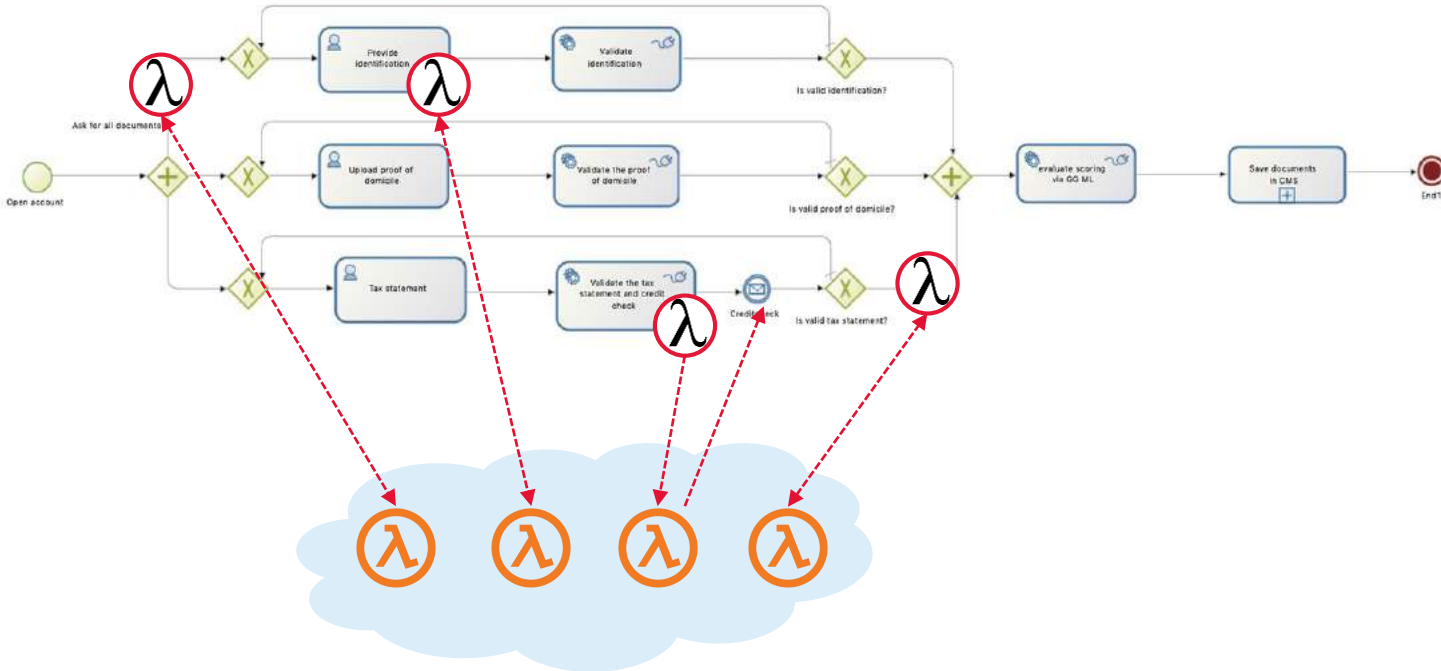
- complexity
- manage asynchronism



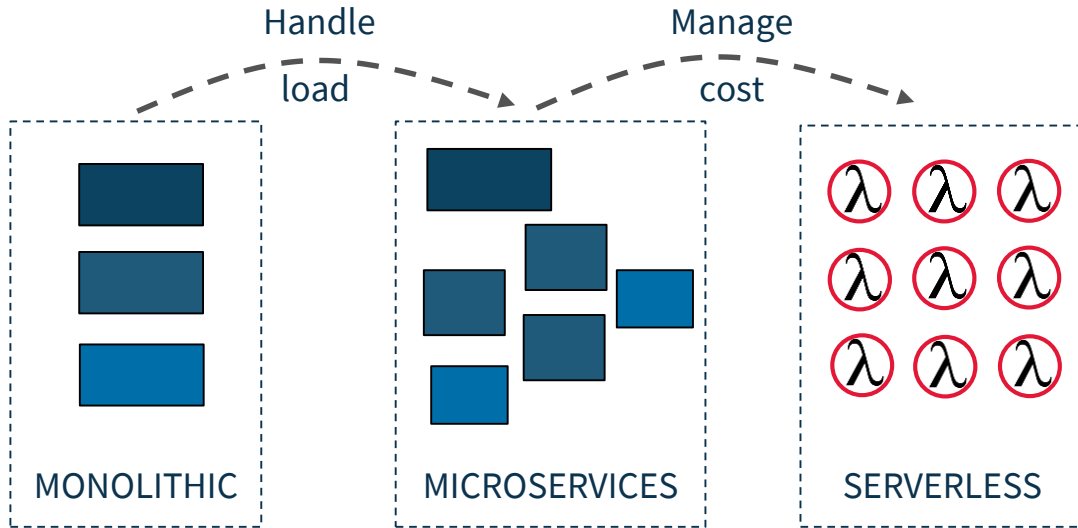


Serverless complements Bonita

Serverless can be used on unpredictable resources consumption



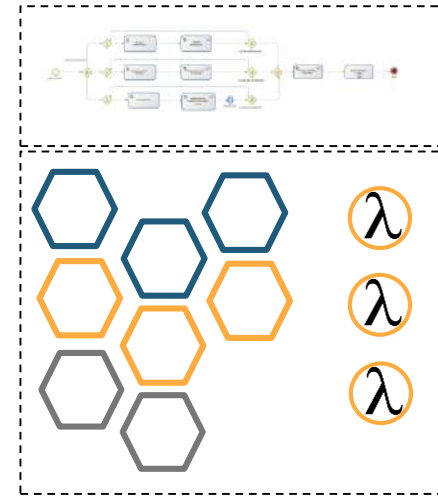
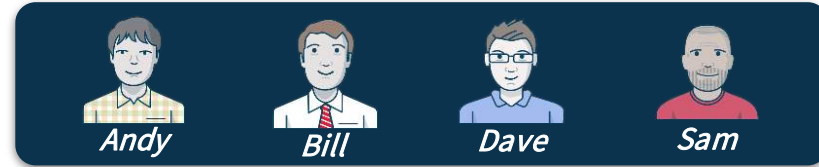
Bonita platform scalability



Bonita Platform complexity abstraction

Project teams focus on business needs and customer experience, not on platform scalability

Bonita, a BPM Platform that scale with Business needs



Demo

Context : Bonita platform used for all G&A processes :

- Platform load is unpredictable
- monthly payroll process should not be impacted by the platform load

⇒ Platform scalability using microservice and serverless in the Cloud

