4 steps to build a successful e-commerce platform

nadine kazan
director of sales

nicolas rose
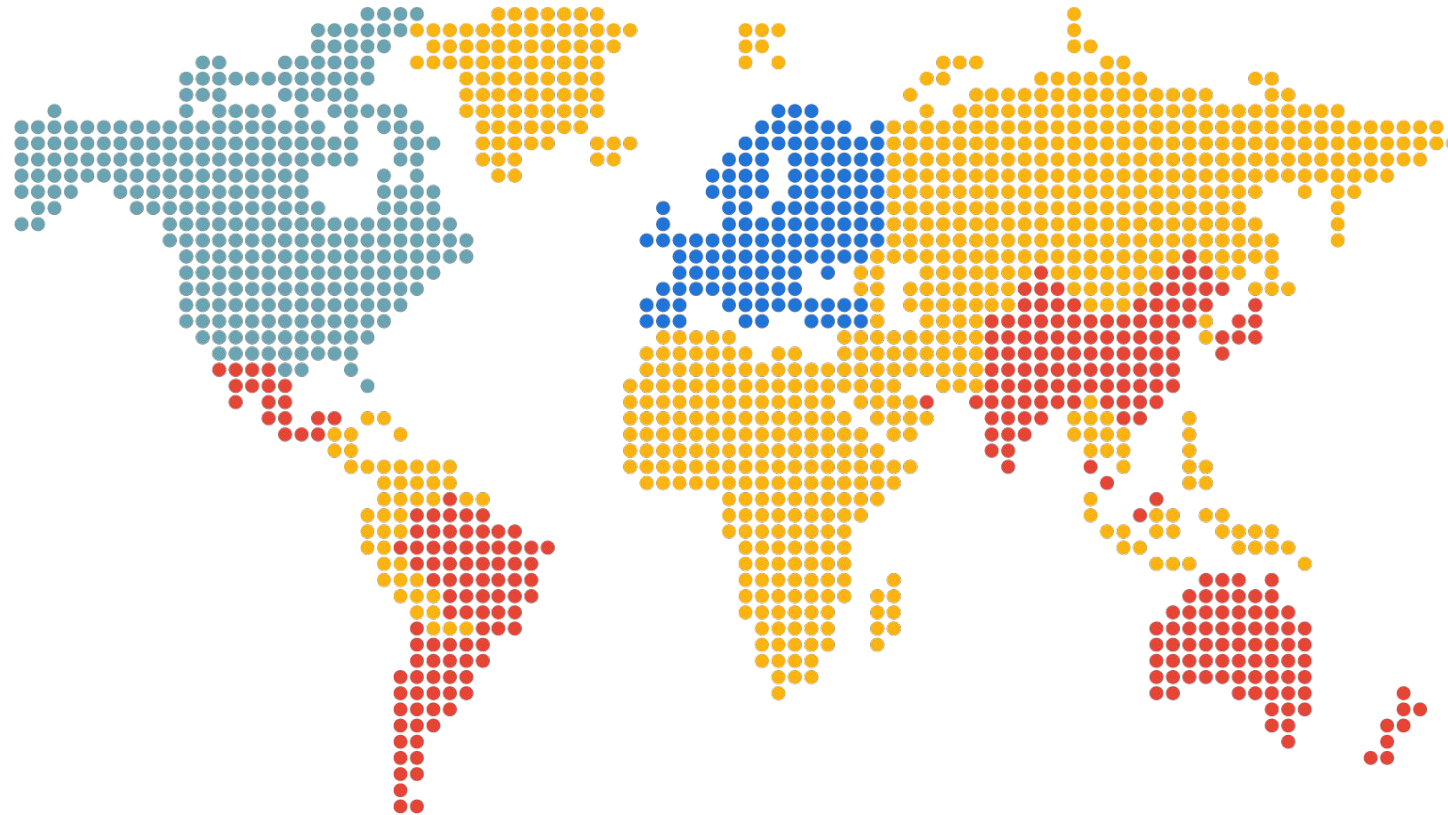director, software development
randstad IT solutions.

agenda

- randstad holding & randstad IT solutions
- our expertise
- the 4 steps to building a successful e-commerce platform
- sonepar e-commerce success story
- questions

our global presence

represents over 90% of the global HR services market.

Americas

Argentina
Brazil
Canada
Chile
Mexico
United States
Uruguay

Asia pacific

Australia
China
Hong Kong
India
Japan
Malaysia
New Zealand
Singapore

Europe and Middle East

Andorra
Austria
Belgium
Czech Republic
Denmark
France
Germany
Greece
Hungary
Ireland
Italy
Luxembourg
Monaco
Netherlands
Norway
Poland
Portugal
Romania
Spain
Sweden
Switzerland
Turkey
United Arab Emirates
United Kingdom

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largest HR services provider worldwide.

€ 23.8
billion in revenue

212,200
permanent placements

38,820
corporate employees

4,858 offices
in 39 countries

668,800
people we help to
work every day

47% women
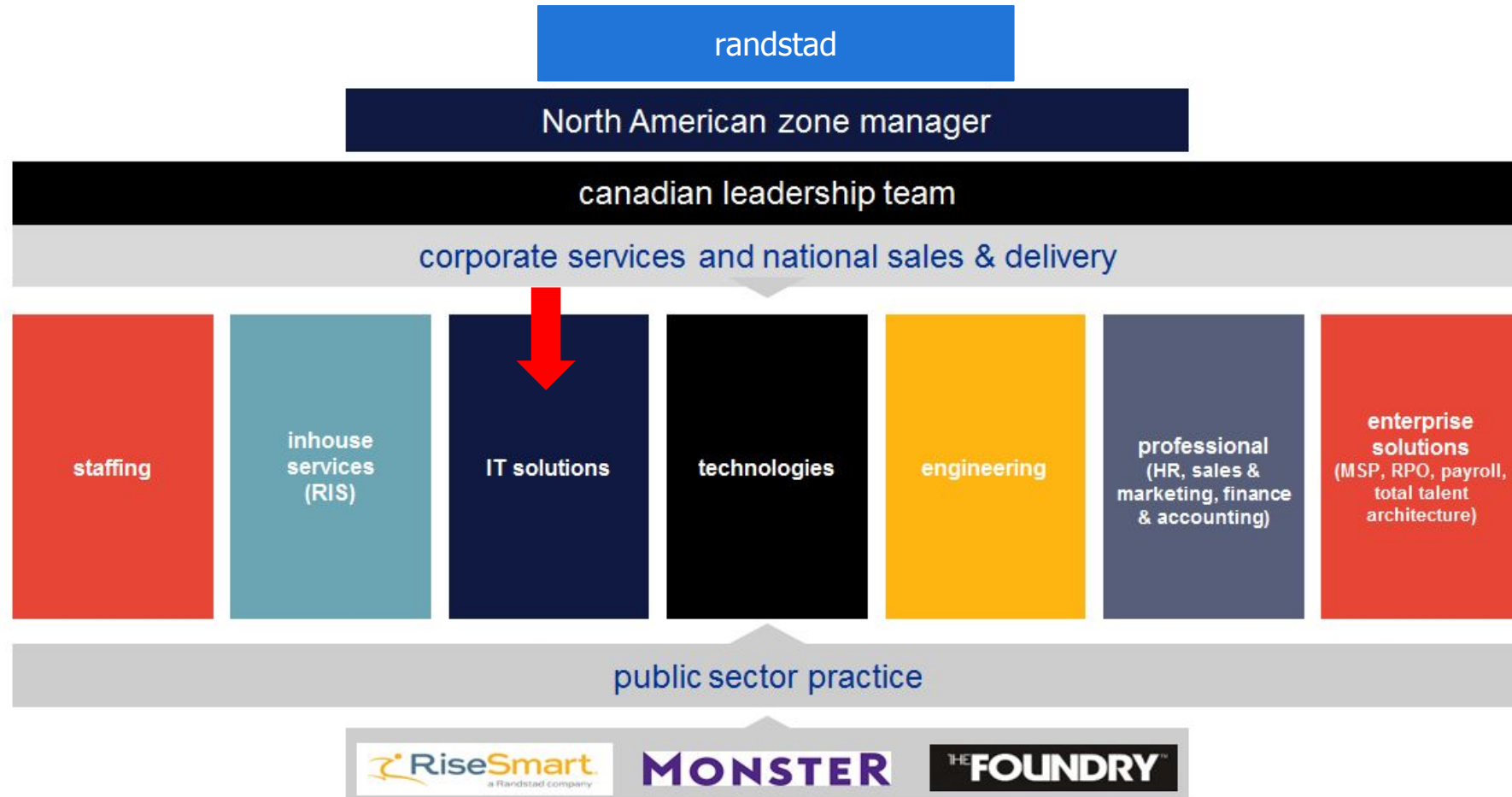in leadership
positions

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Randstad Canada is the country's largest staffing firm and the leader in the HR services industry.

With over 900 employees located across the country, we are a trusted human partner in the technologically driven world of talent.

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our organizational structure

randstad IT solutions - our main focus

building teams in a heartbeat

migration to the cloud

devops & automation practice

software development

- leverage the largest recruiter in Canada (150 IT recruiters)
- 1000 employees in Canada
- 5000 customers in Canada
- fix scope, T&M or Hybrid
- 100% on time & on budget
- possibility to hire resources after the project is completed

- migration to Azure, AWS, GCP
- cloudnative & serverless
- lift & shift
- architecture optimisation
- microservices
- on-demand resources
- massive scalability

- accelerate deployments
- accelerate release frequency
- work faster and smarter
- CI/CD (continuous integration and delivery)
- agile methodology
- application refactoring
- team training

- web, mobile, E-commerce
- full stack
- automated testing
- .NET, React, Angular, Vue.JS, WPF, Java
- SQL, No DB, Service bus, WF

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randstad IT solutions - unique in the market

no one else brings together all of our differentiators

in-house expertise

- project management
- architecture skills
- 40 person dev. team

"Dedicated talent available for projects"

ability to scale

- direct access to most talent in Canada
- 150+ technical recruiters

"immediately and directly scale any IT project'

knowledge retention

- mixed teams—jointly developed projects
- retain talent post project

"develop our client's talent or leave ours behind"

flexibility & agility

- start-up mindset, project delivery custom & focused every time
- team construction best fit for each client

"every client is unique so each solution should be as well"

organizational stability

- present in 39 countries
- largest access to talent in Canada
- financially stable

"if a project is under stress we have the financial ability to invest and solve the problem"

financial flexibility

- pay only for what you need
- direct access to talent—no margin stack
- access to global delivery

"with a flexible approach and direct access to external talent blended costs are below market"

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4 steps to building a successful e-commerce platform:

- architecture design
- cultural change (devops/agile)
- implementation
- CI/CD

to the cloud and beyond.

randstad IT solutions

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blessed who knows to take his time to go faster!

« Inuit Proverb »

- remove the downtime
- upgrade the technology stack
- smooth transformation (no service interruption)
- no big bang

roadmap

1. proof of concept

2. microservices architecture evolution and Azure transition

3. open catalog website

4. B2B website migration

5. add the B2C version…
   … and many more features

1. proof of concept

- feasibility
- cost assessment
- validate the benefits to the Line of Business :
  - cloud migration
  - microservices architecture

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2. cloud architecture

- stabilize and then improve the current performance
- reduce the downtime by removing the dependencies to any internal system
- help the team to get familiarize with Azure technologies and a microservices architecture
- smooth migration

  one microservice at a time

  leverage the « shadow » mode

- Infrastructure as code (IAAS)

Canada East
(Quebec)
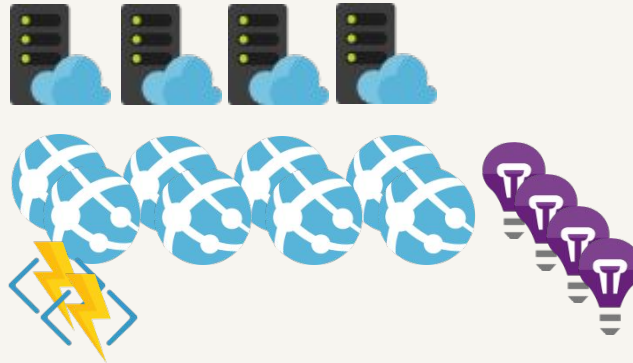
Canada Central
(Toronto)

Traffic Manager
(DNS ; Geographic)

App Gateway
(Reverse Proxy)

Compute
(App Service Plans,
App Services,
Function Apps)

Storage
(Service Bus,
SQL Managed,
Redis)

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3. « open catalog » website

- build a new front-end website that consumes the microservices
- introduce a new features to the end-customers without altering the actual b2b website
- anticipate the rewrite of the b2b website:
  - The new website will be the foundation of the upcoming b2b website
  - Built for Azure
- introduce the mobile application
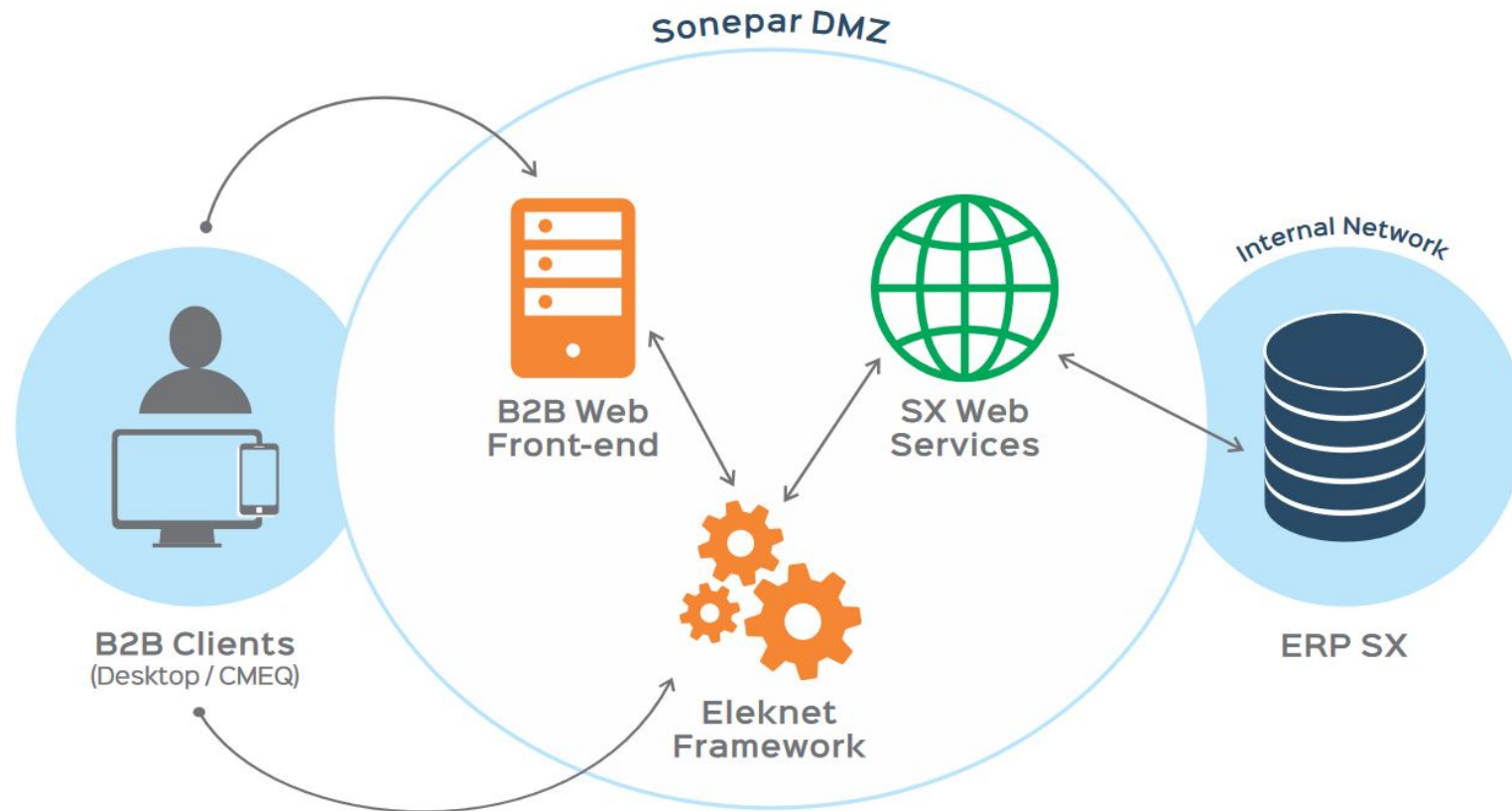
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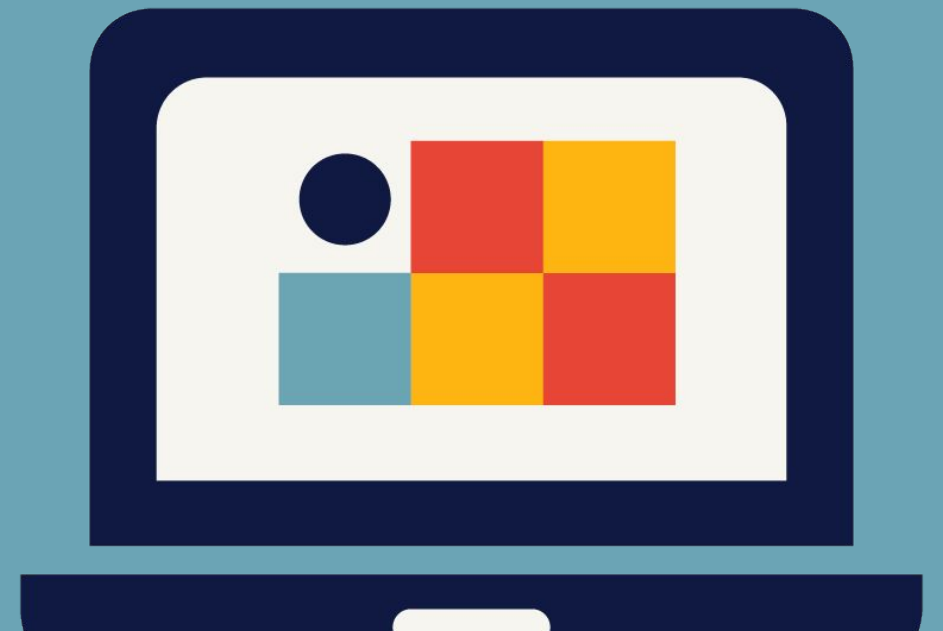
4. B2B website migration

- ## as-is in term of features
  (some low-technical impact features have been added though)

- ## focus on the UX/UI experience

- ## improve the back-end

- ## SLA of 99.95%

  (<44 hours max of downtime per year)
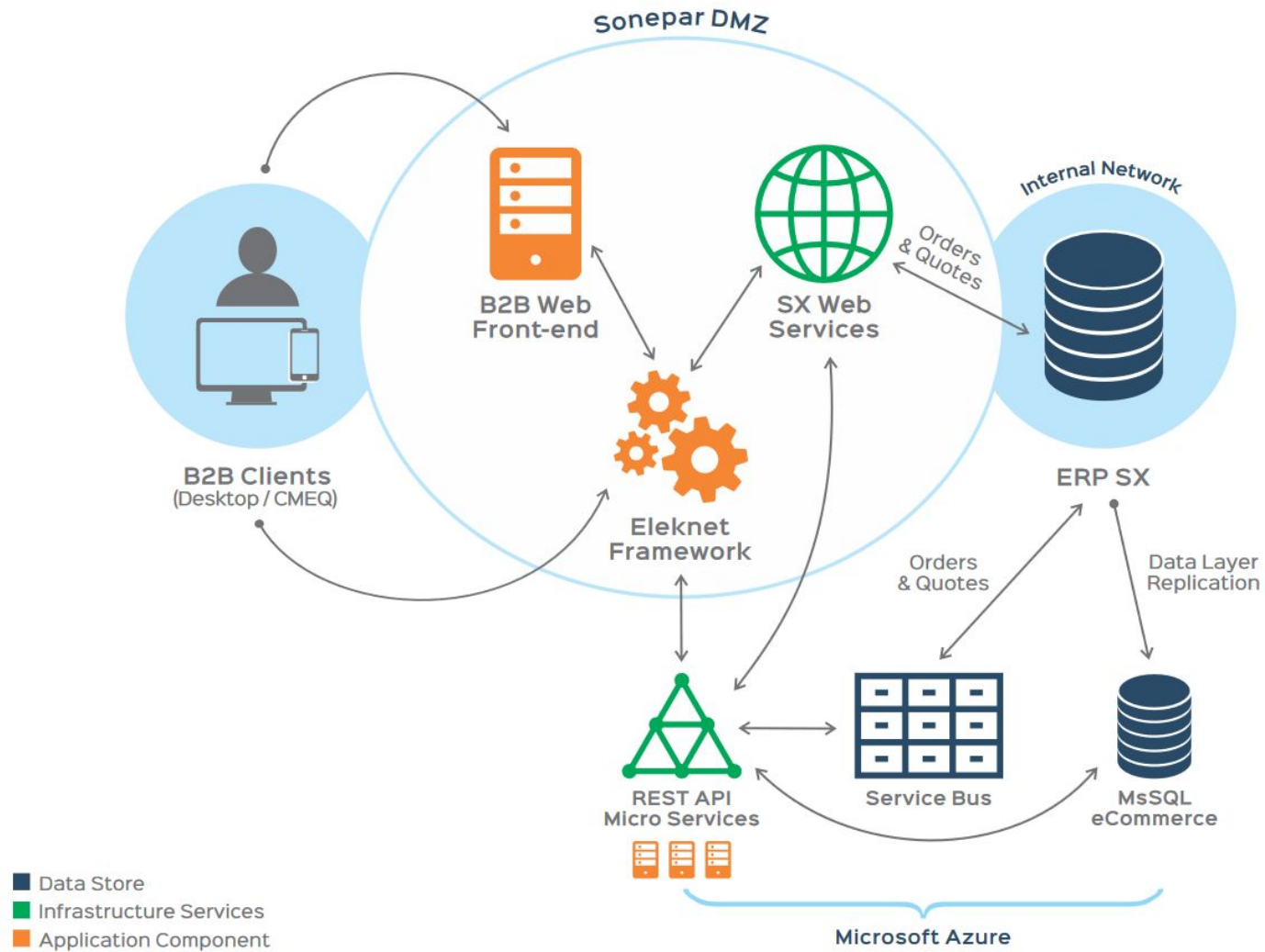
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5. and beyond!

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B2B Clients
(Desktop / CMEQ)

B2B Web
Front-end

SX Web
Services

Eleknet
Framework

Internal Network

ERP SX

■ Data Store
■ Infrastructure Services
■ Application Component

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Sonepar DMZ

Internal Network

B2B Web
Front-end

SX Web
Services

Orders
& Quotes

ERP SX

B2B Clients
(Desktop / CMEQ)

Eleknet
Framework

Orders
& Quotes

Data Layer
Replication

REST API
Micro Services

Service Bus

MsSQL
eCommerce

Microsoft Azure

- Data Store
- Infrastructure Services
- Application Component

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Sonepar DMZ

Internal Network

Orders & Quotes

B2B Web Front-end

SX Web Services

ERP SX

B2B Clients (Desktop / CMEQ)

Eleknet Framework

Orders & Quotes

Data Layer Replication

B2C Clients

B2C Web Front-end

REST API Micro Services

Service Bus

MsSQL eCommerce

Data Store
Infrastructure Services
Application Component

Microsoft Azure

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Sonepar DMZ

Internal Network

Legacy Desktop
Gestion CMEQ

Eleknet
Framework

ERP SX

Orders
& Quotes

Data Layer
Replication

Mobile APP

B2C & B2B
Clients

REST API
Micro Services

Service Bus
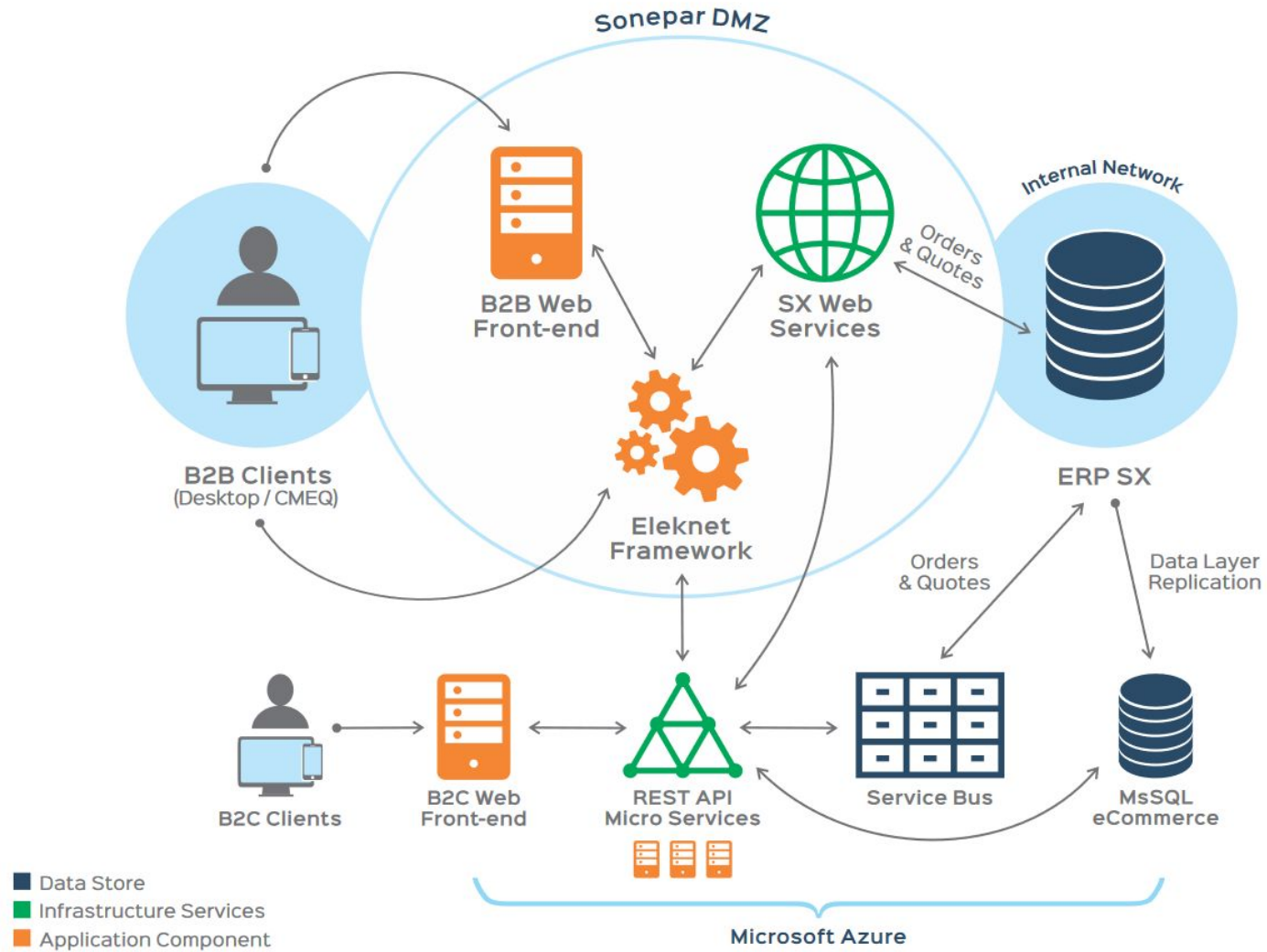
MsSQL
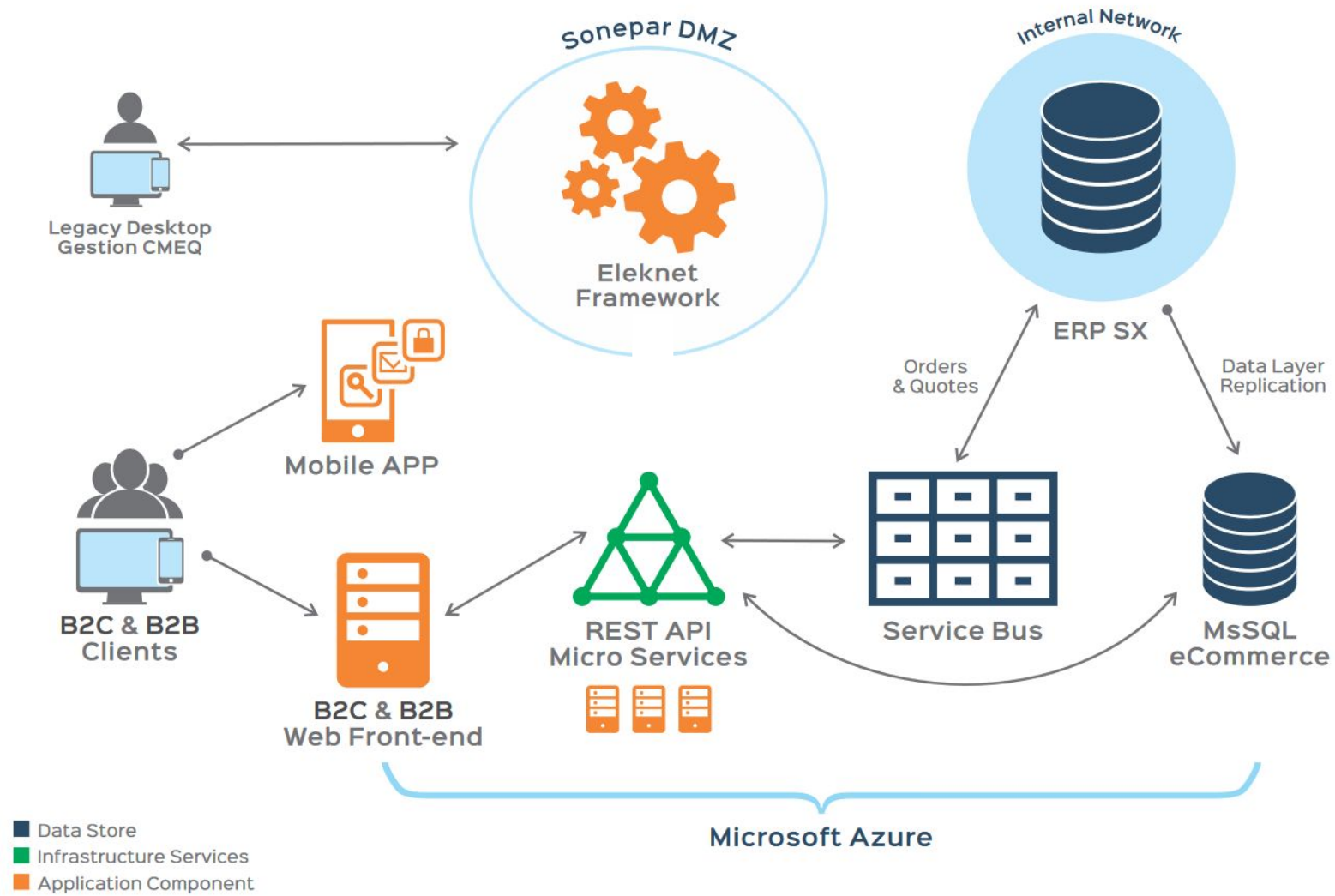eCommerce

B2C & B2B
Web Front-end

Microsoft Azure

■ Data Store
■ Infrastructure Services
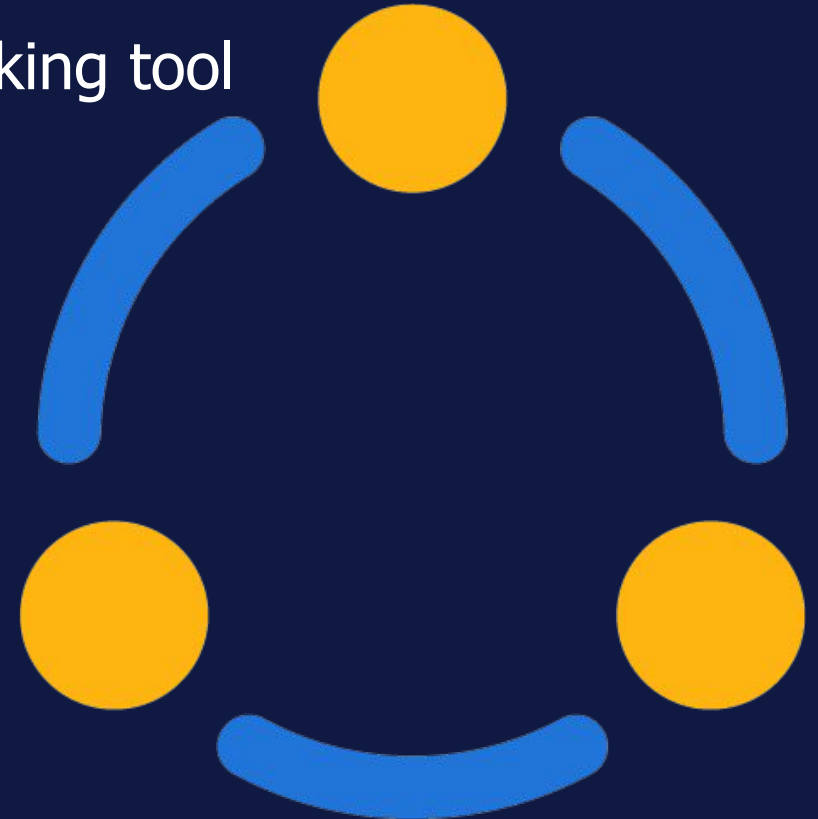■ Application Component

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agile transformation

move to an agile delivery method
(Scrum ; New processes ; New roles)

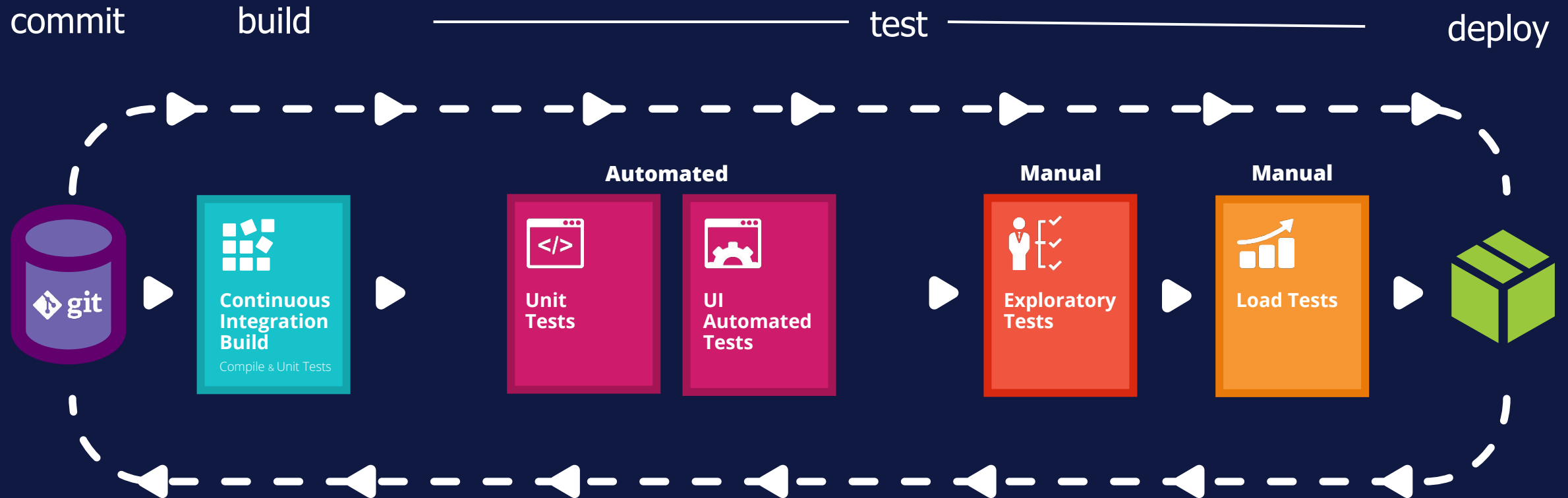introduction of azure DevOps (Jira-like) as a tracking tool
(requirement, velocity, bugs, etc.)

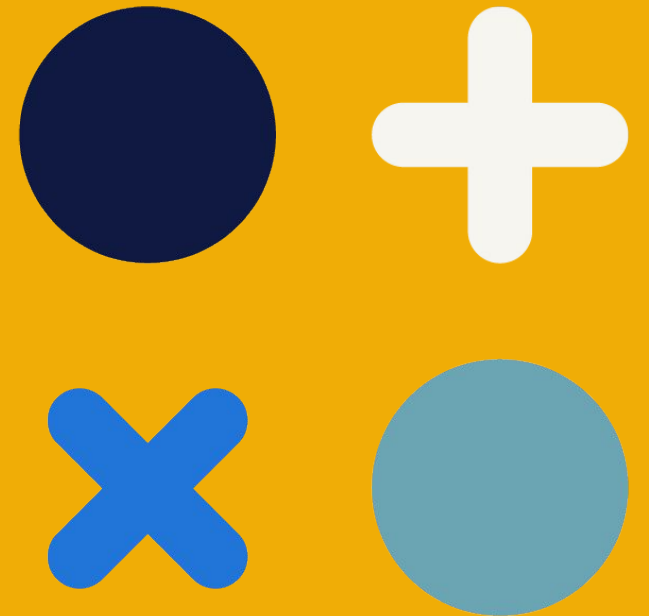randstad

DevOps transformation

- introduce Git
  (branch management; linear history -rebase)

- code review and pull request policies

- unit tests and code coverage

- UI automated tests

- automated build

- automated deployment

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continuous integration / continuous delivery

commit   build   test   deploy

Continuous Integration Build
Compile & Unit Tests

Automated

Unit Tests

UI Automated Tests

Manual

Exploratory Tests

Manual

Load Tests

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transformation in numbers

- 1,100 Pull Requests
- 3,000 Commits
- 1,500 Unit Tests
- 6,400 Work Items
- 20M requests per month (microservices)
- average response time of 20~200ms (microservices)
- average web page load time 500ms~2s (5~10s before)
- 10~20 deployment per day
- no downtime

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timeline / resources

- POC   1 month / 1 person / Sonepar
- microservices 6 months / 3 people / Randstad
- open catalog   3 months / 3 people / Sonepar
- B2B   8 months / 8 people / Sonepar

in conclusion

- the development team is now disciplined around
  up-to-date software engineering best practices
  (Agile, DevOps, CI/CD)
- updated technology stack
- smooth transformation
  (without any service interruption)
- no big bang
- improved performance and stability

"blessed who knows to take his time to go faster!"
« Inuit Proverb »

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questions?

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human forward.