



# Ecole Polytechnique Fédérale de Lausanne

## Strategy for EPFL-SI

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Vice-president for Information Systems

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- Etienne Marclay, Nathalie Pichard, Jean-François Ricci, Didier Rey
- the EPFL schools
- Service Factory - Governance Team
- Service Factory - Communication

# Strategy ? - A Top-down View of Bottom-up Projects

“ A strategy is a statement of intentions

tion de  
collaborateurs IT

The future belongs to those  
who prepare for it together

Malcom

# Strategy ? - A Top-down View of Bottom-up Projects

“ A strategy is a statement of intentions that becomes more and more concrete through shared projects ”

”







### CHALLENGES

#### Organization

- Growing dependency on information
- EPFL organization's complexity requires strong IS support to coordinate activities
- Cultural difference between start up logic in research and institutional logic in administration

#### Innovation

- Increasing global competition between universities
- Business innovation relies heavily on IT

#### Compliance & IT security

- More demanding regulatory environment
- Security and privacy challenges

#### IT organization & IT financing

- IT organization distributed across all EPFL
- Overall IT budget not growing
- IT budget across all EPFL (local optimization)

#### IT Technology

- Rapidly changing IT landscape
- New paradigms, such as mobility, cloud, virtualization

EPFL-SI

### INTENTIONS

To bring **value** to users through IS services.

To boost EPFL **innovation** through IS services.

To ensure legal and regulatory **compliance** together with **security**.

To **coordinate** actors in the IS service organization and to efficiently allocate **resources**.

To respond to the IT **technology revolution** and to take advantage of it.

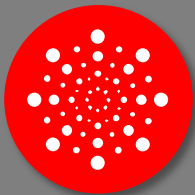
# Key Values - Collaboration and Decision Making

EPFL management supports the following values:



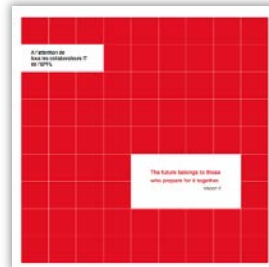
Efficiency and proper involvement in the decision making process

The goal is finding technologies & architectures that best satisfy the clients while being affordable



Collaboration and mutual understanding

A good understanding of the various IT teams (central, faculties, laboratories) functioning is crucial in order to develop a coordinated and efficient information system



# Summary

1

An example to illustrate concretely the strategy



From Projects  
to the Strategy of EPFL-SI

2

EPFL – SI

**Disclaimer**

the example is a combination of the real project as it happened and the ideal project as it could have happened.

# Example

## Computer Classrooms Infrastructure Update



Approx.  
25 computer  
classrooms



Computer  
Classroom  
Administrators

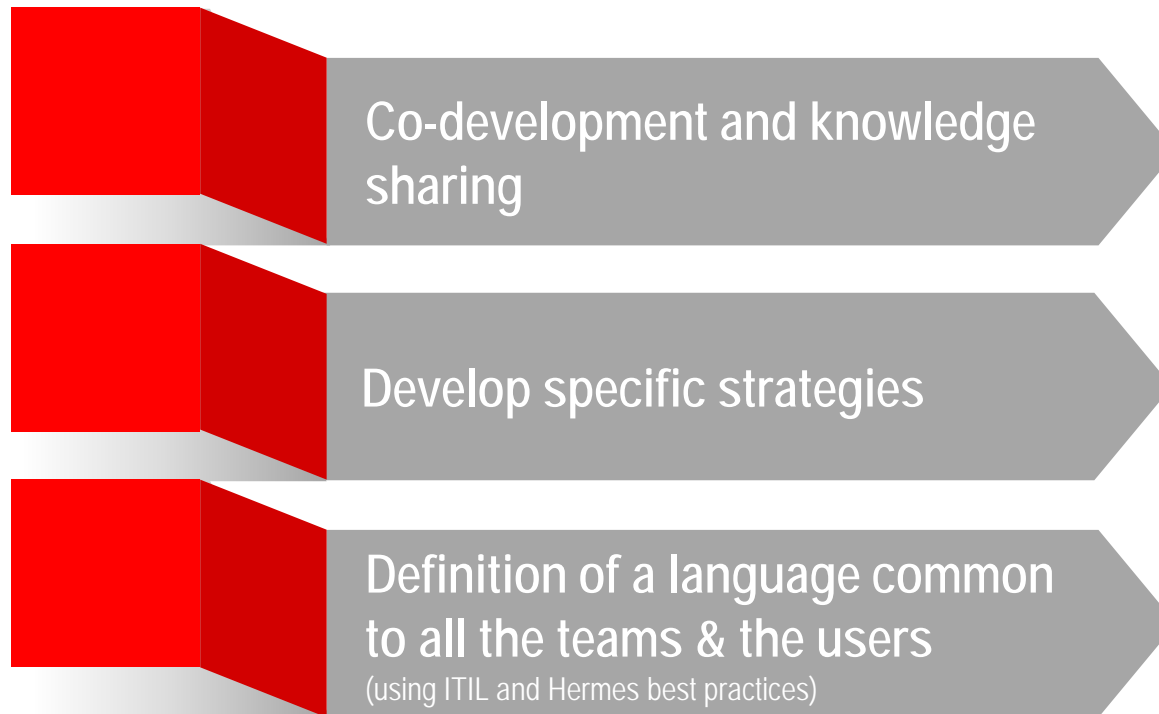
Paulo De Jesus (ENAC)  
Philippe Olivier Borel (SV)  
Florence Hagen (SB)  
Claude Mary (STI)  
Carlos Perez (I&C)  
and many others...

Each school is managing its own infrastructure for the computer classrooms.

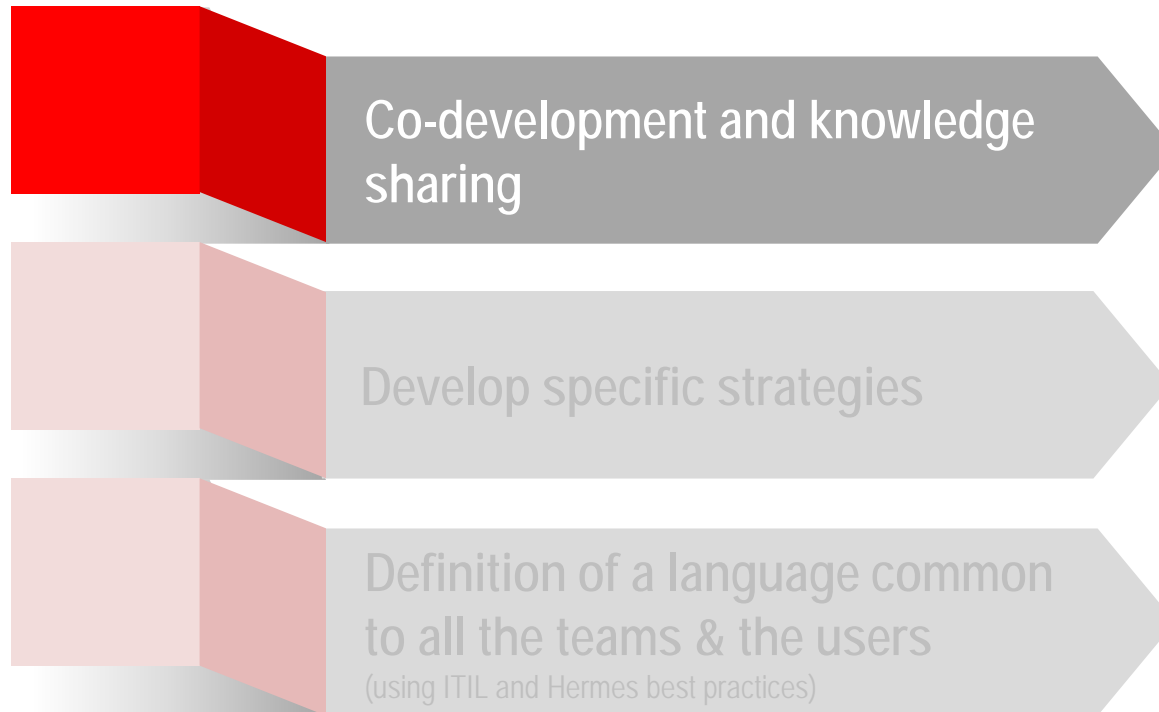
Could part of this infrastructure be federated and provided by the Service Factory to remove this burden from the schools?



A lot of  
infrastructure  
(managed  
by schools)







# Example

## The VDI Project - the Design of an Infrastructure



Approx.  
25 computer  
classrooms

A study was started lead E. Kerjci – project manager - & D. Perret – potential service manager (Service Factory) together with P. De Jesus (ENAC), P. Borel (SV), F. Hagen (SB), C. Mary (STI), C. Perez (I&C) and key users.

**This project is called VDI**  
(as "Virtual Desktop Infrastructure").



Computer  
Classroom  
Administrators

Paulo De Jesus (ENAC)  
Philippe Olivier Borel (SV)  
Florence Hagen (SB)  
Claude Mary (STI)  
Carlos Perez (I&C)  
and many others...



Eric Krejci  
Project mgr



Daniel Perret  
Service mgr





Mobile  
Platforms

Virtualisation  
And  
Cloud

Integration  
Technology  
(e.g. ESB)

Technologies of Choice (Architecture)



Mobile  
Platforms

Virtualisation  
And  
Cloud

Integration  
Technology  
(e.g. ESB)

Technologies of Choice (Architecture)

# Example

## The VDI Project - Architecture "Validation"



Approx.  
25 computer  
classrooms



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Claude Mary (STI)  
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and many others...



Eric Krejci  
Project mgr



Daniel Perret  
Service mgr



Giorgio  
Anastopoulos  
**Architect**

The architect is involved to evaluate if the solution can be leveraged in other contexts.

The choice taken matches the overall EPFL-SI strategy.





# Example

## The VDI Project - Designing User Interactions

A federated infrastructure that can manage thousands of virtual machines was selected and designed. The technology fits the preliminary architecture strategy.

How to provide these new capabilities?



Approx.  
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Eric Krejci  
Project mgr



Daniel Perret  
Service mgr





# Example

## Definition of the VDI ( Technical ) Service



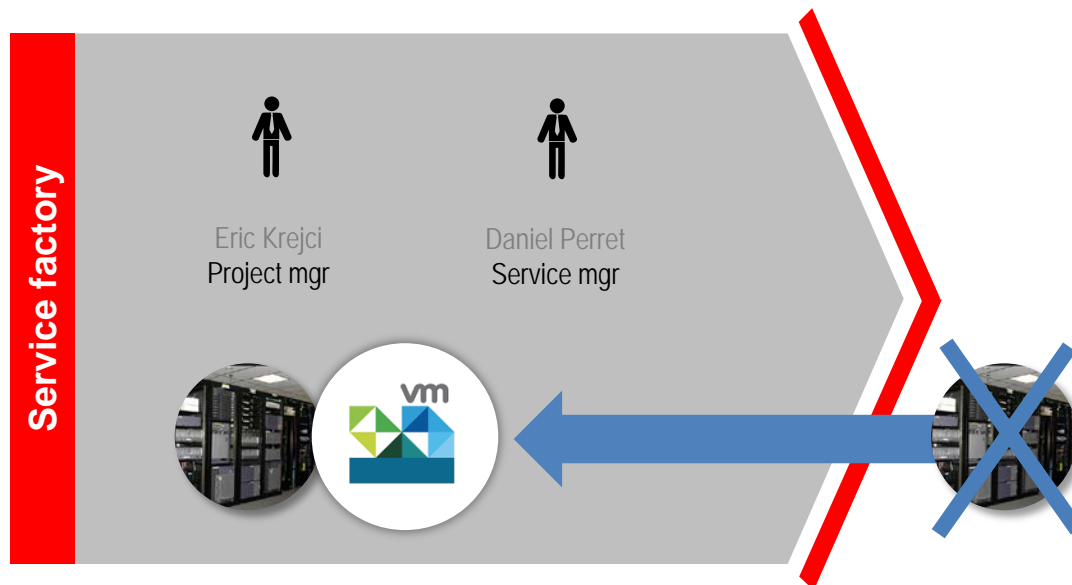
Approx.  
25 computer  
classrooms

A (technical) service, called VDI is developed and offered by the Service Factory to the computer classrooms administrator. It replaces the infrastructure managed in each school and remove the risks and costs from the classroom administrators.



Computer  
Classroom  
Administrators

Paulo De Jesus (ENAC)  
Philippe Olivier Borel (SV)  
Florence Hagen (SB)  
Claude Mary (STI)  
Carlos Perez (I&C)  
and many others...



# Example

## Creation of the VDI ( Technical ) Service



Approx.  
25 computer  
classrooms



Computer  
Classroom  
Administrators

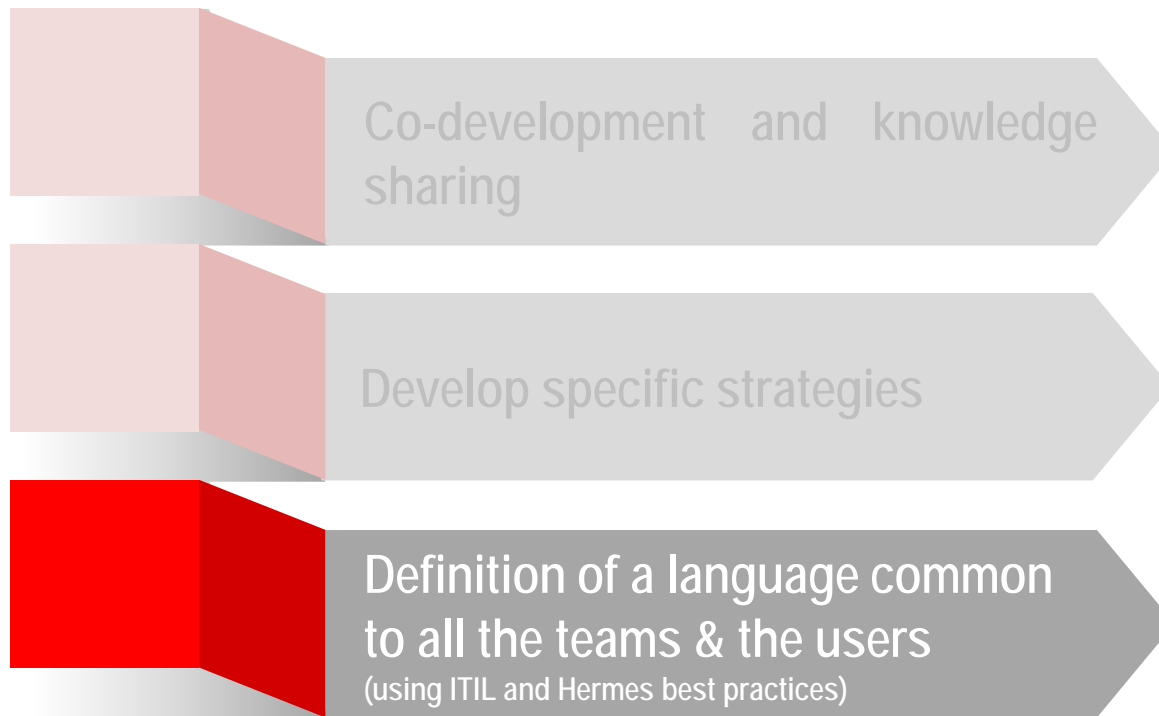
VDI is now a service that brings value to the class administrators.

The service implementation is not important to the user as long as the service is provided.

Paulo De Jesus (ENAC)  
Philippe Olivier Borel (SV)  
Florence Hagen (SB)  
Claude Mary (STI)  
Carlos Perez (I&C)  
and many others...

Service factory

VDI



# Example

## Designing (Business) User Interactions



Approx.  
25 computer  
classrooms



Computer  
Classroom  
Administrators

VDI is now a service that brings value to the class administrators.

How to organize the service of the computer classroom to bring value for the users?



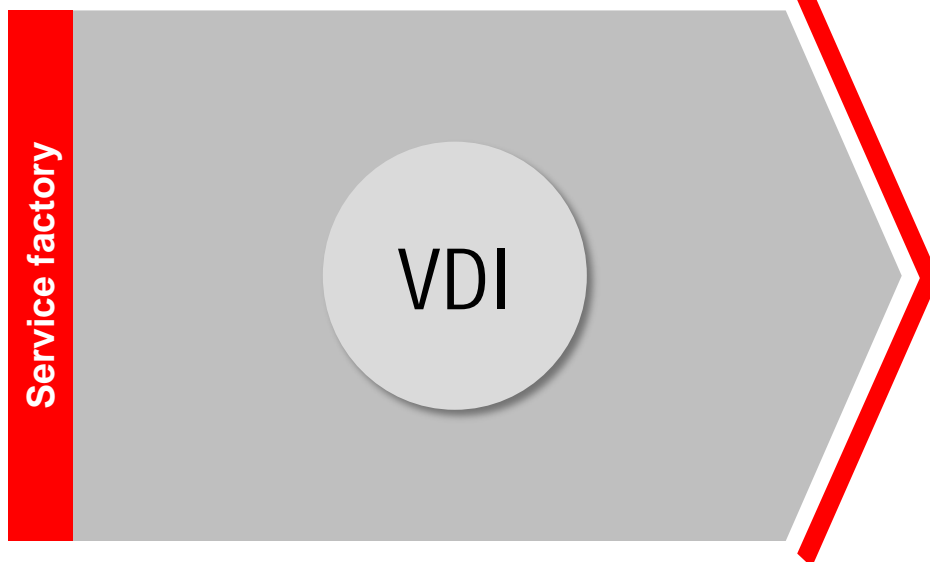
Olivier Burdet  
Teacher

and many others...



Nina Desnica  
Student

and many others...







# Example

## Creation of the Computer Classrooms (Business) Services

A (business) service, called Computer Classroom is developed and offered by schools IT to teachers and students.

School IT (ENAC, I&C, SV, SB, STI)

Service factory



Approx.  
25 computer  
classrooms



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Classroom  
Administrators

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Philippe Olivier Borel (SV)  
Florence Hagen (SB)  
Claude Mary (STI)  
Carlos Perez (I&C)  
and many others...

VDI



Olivier Burdet  
Teacher

and many others...

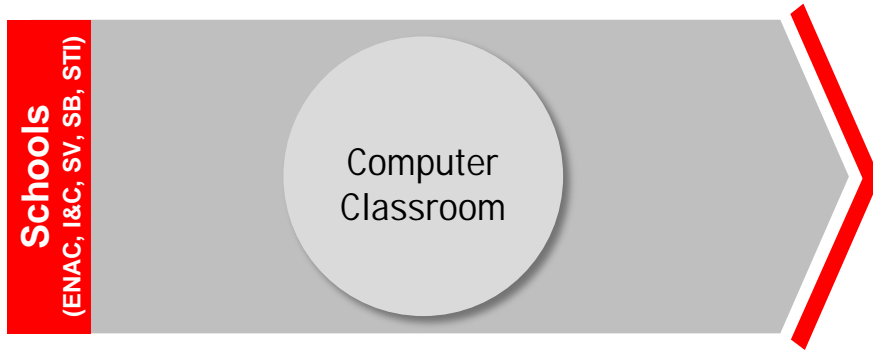


Nina Desnica  
Student

and many others...

# Example

## Creation of the Computer Classrooms Services



The teachers do not need to get involved in the implementation of the service, they benefit of the value of the service.



Olivier Burdet  
Teacher

and many others...



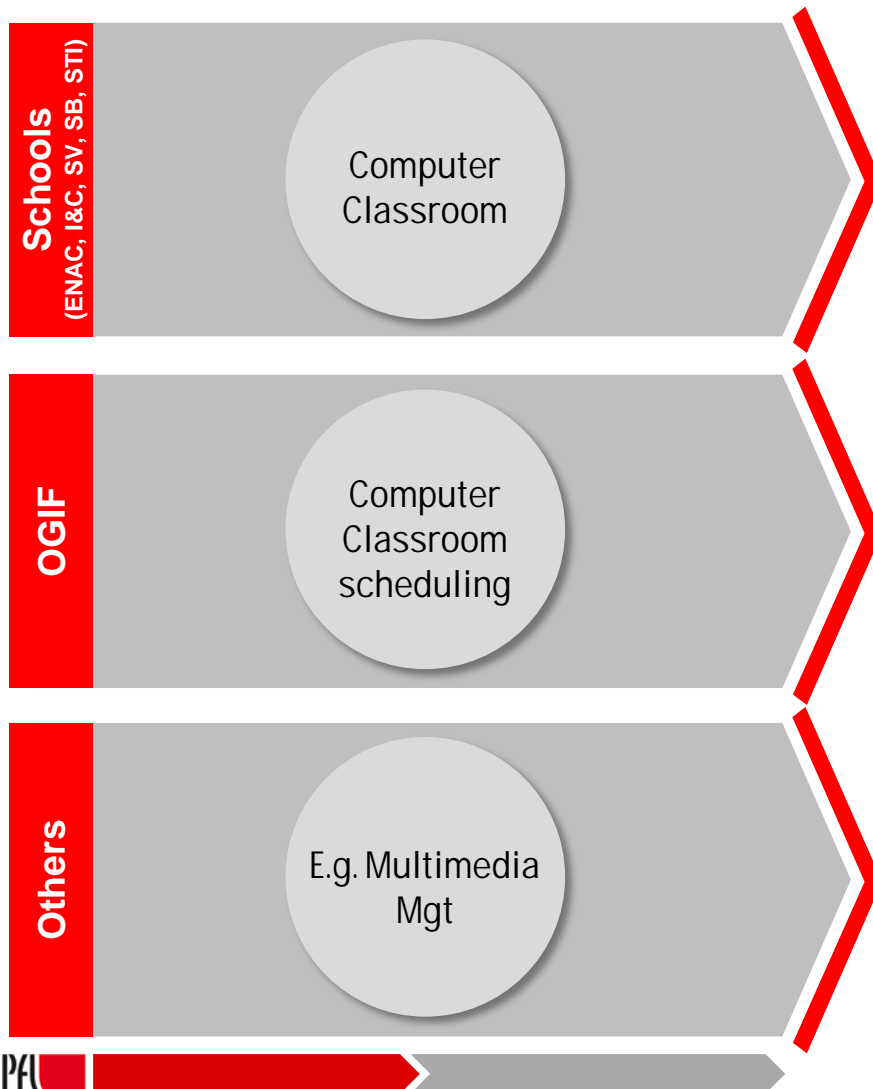
Nina Desnica  
Student

and many others...



# Example

## Creation of the Computer Classrooms Services



Who dreams of the synergy / strategy between the different services targeting the same kinds of users ?

The segment manager!



Olivier Burdet  
Teacher

and many others...



Laurent Ramelet  
Segment mgr  
teaching



Nina Desnica  
Student

and many others...

# Example Development of Specific Strategies

## EPFL-SI Overall Strategy



### Architecture strategy/ies



Giorgio  
Anastopoulos  
Architect



Architect  
delegates

- Can the virtual desktop infrastructure be used outside the classrooms ?
  - ▶ For central services ?
  - ▶ For admin in labs ?

### Segment strategies



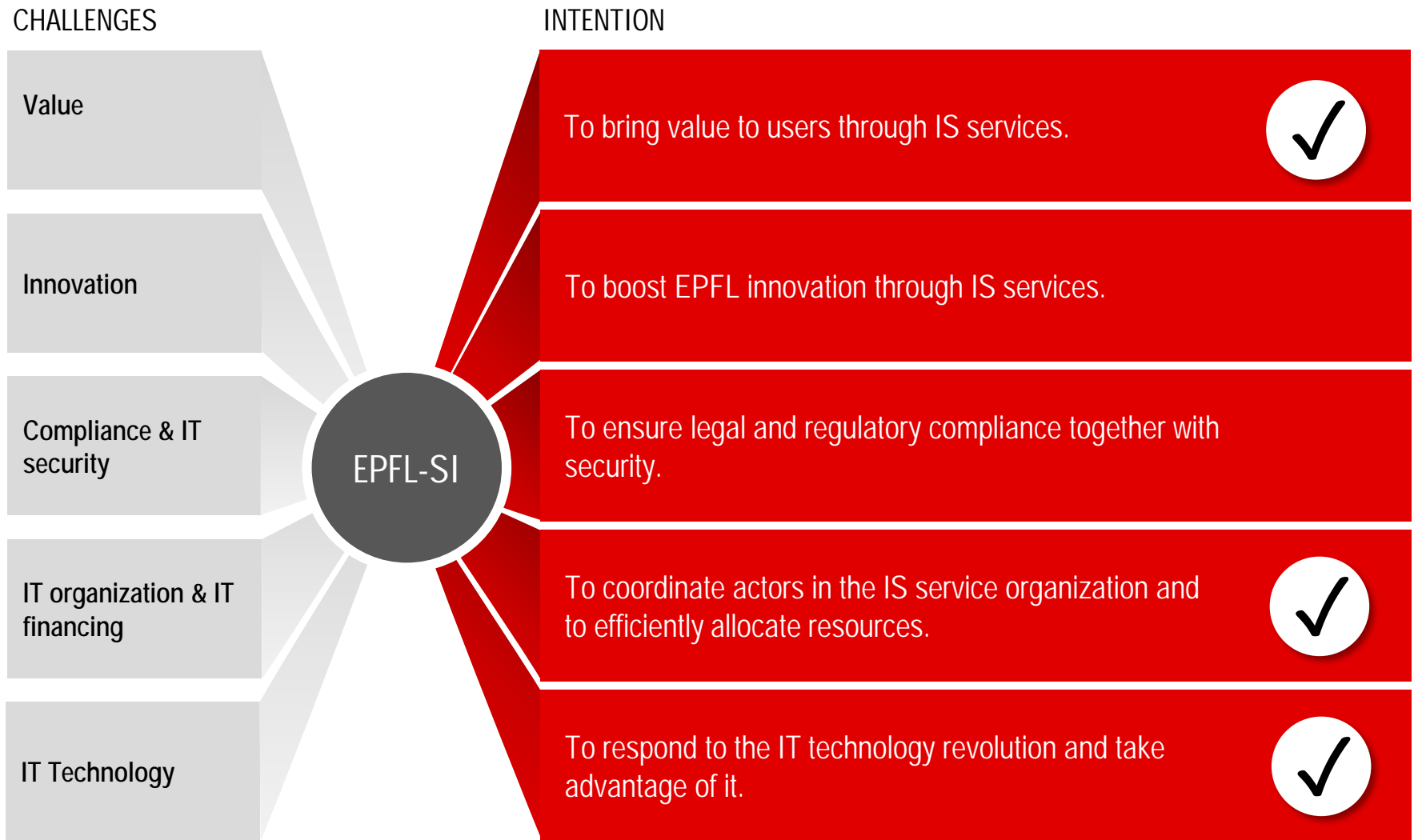
Laurent Ramelet  
Segment mgr  
teaching

- How to organize exams ?
- How can the computer classroom management service be integrated with other services targeting students ?
- Should we promote a "notebook only" strategy ?



Segment mgr  
& 6 other strategies





# Summary

1

An example to illustrate concretely the strategy

2

EPFL – SI

### The creation of EPFL-SI

EPFL - SI



Computer  
Classroom  
Administrators

Paulo De Jesus (ENAC-IT)  
Philippe Olivier Borel (SV-IT)  
Florence Hagen (SB-IT)  
Claude Mary (STI-FORM)  
Carlos Perez (SIFAC – I&C)  
and many others...



Eric Krejci  
Project mgr  
(Service  
Factory)



Daniel Perret  
Service mgr  
(Service  
Factory)



Giorgio Anastopoulos  
**Architect**  
(Service Factory)



Laurent Ramelet  
**Segment mgr**  
**Teaching**  
(Service Factory)



Olivier Burdet  
Teacher

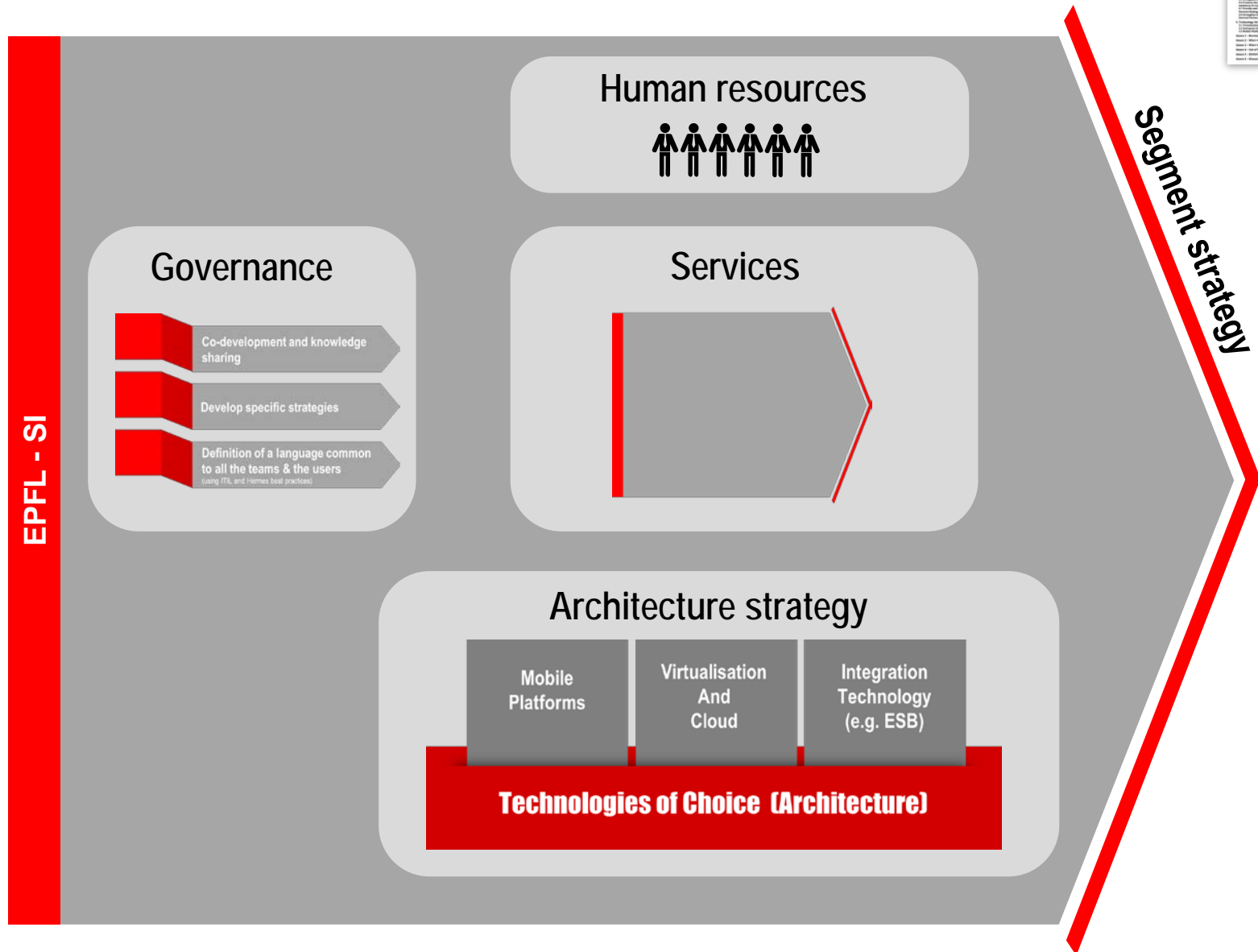
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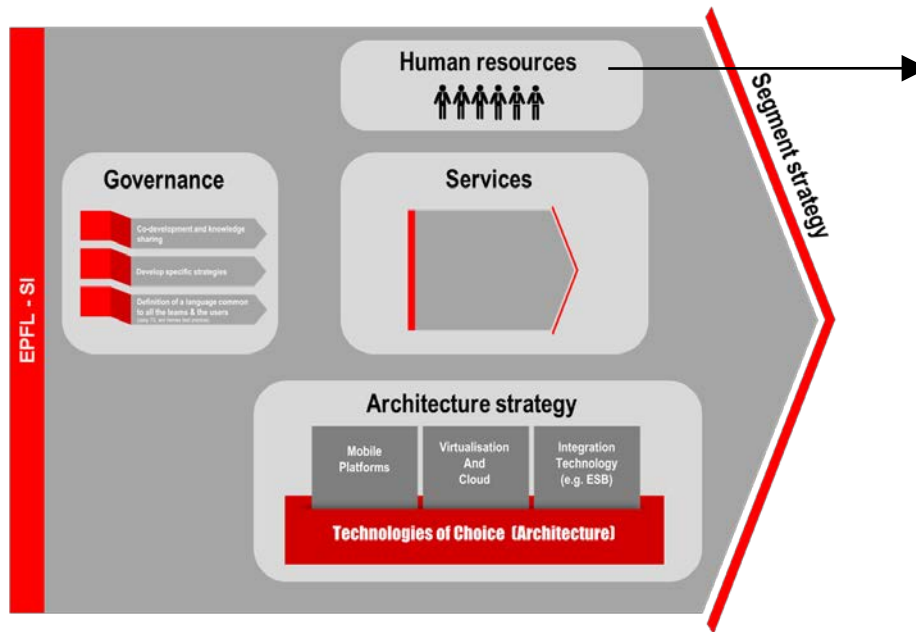
Nina Desnica  
Student

and many others...

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# The Birth of EPFL-SI



## Human resources / members of EPFL-SI:

- CDM/CDH-IT
- CEDE
- DII
- ENAC-IT
- OGIF
- OS
- Service Factory
- SB-IT
- SCITAS
- SDSC
- SIFAC (I&C)
- SISB
- STI-IT
- SV-IT
- Local IT support (labs)
- ... and many others

Lead by the different governance bodies

# Governance to Help Federating

The Governance & Global Strategy of the EPFL - Information Systems	
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2	1.1 The EPFL Information Systems Strategy
3	1.2 The EPFL Information Systems Governance
4	1.3 The EPFL Information Systems Architecture
5	1.4 The EPFL Information Systems Security
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25	2.15 The EPFL Information Systems Governance Recognition
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27	2.17 The EPFL Information Systems Governance Authorization
28	2.18 The EPFL Information Systems Governance Registration
29	2.19 The EPFL Information Systems Governance Licensing
30	2.20 The EPFL Information Systems Governance Certification



Governance bodies - to make explicit the feedback loops and to integrate all relevant parties in decisions.

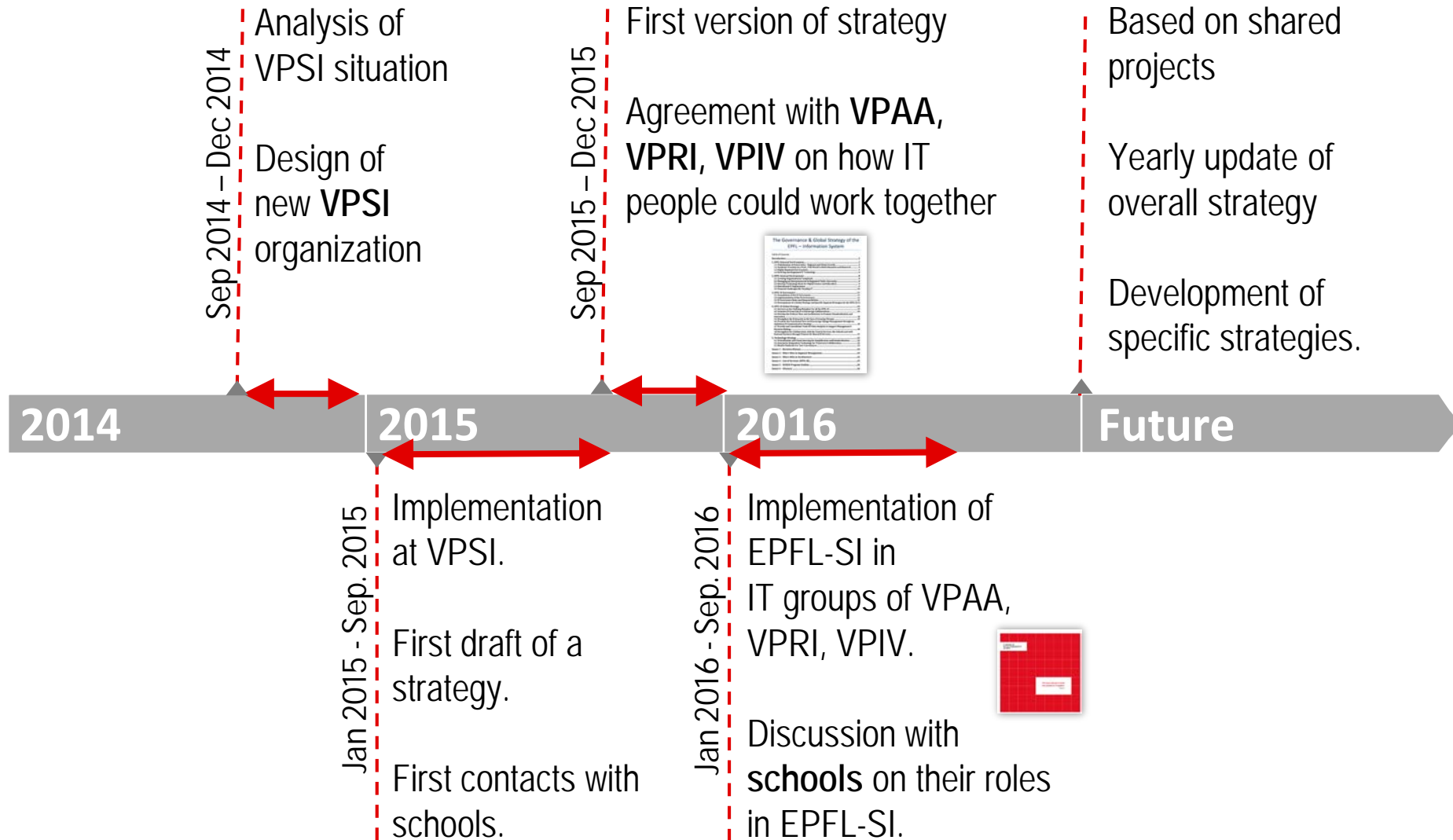
## Committees:

- EPFL-SI coordination & strategy
- EPFL-SI Project and Service portfolio Management (PSPM)
- Segment Strategies (research, teaching...)
- Architecture and know-how
- Security

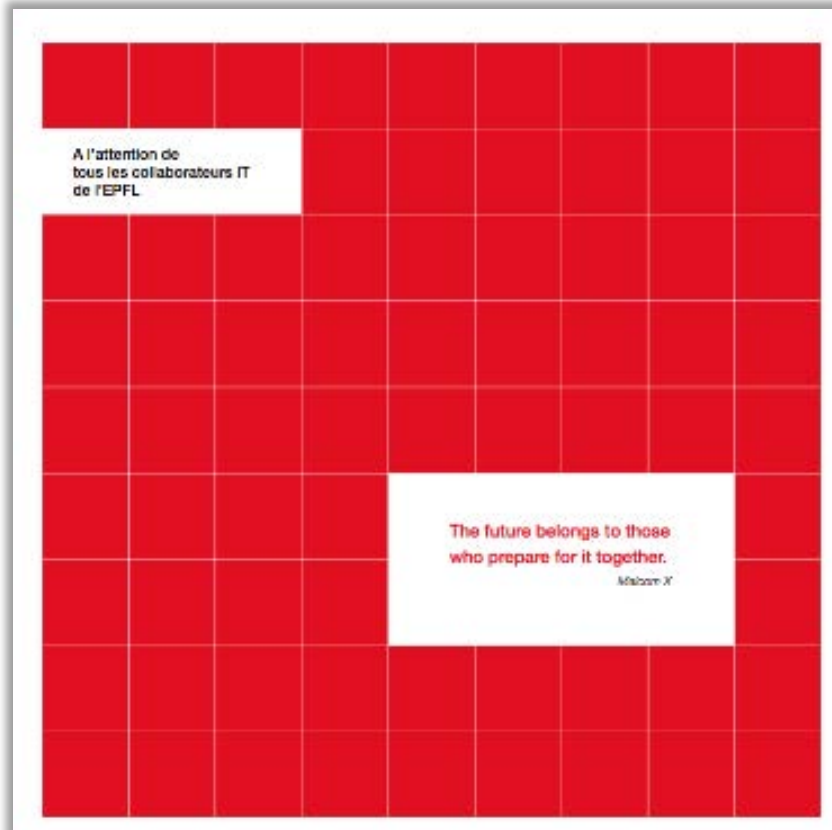
*The vice-president of VPSI in the role of CIO assumes the coordination of the governance bodies together with EPFL direction.*



# Timeline



# To Know More...



## The Governance & Global Strategy of the EPFL – Information System

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[http: it.epfl.ch](http://it.epfl.ch) (in construction to become EPFL-SI web site)

# EPFL IS: a new framework



Allow IT professionals to **grow and evolve** in their IT career

Promote all **collaboration** and encourage **shared and agreed best practices**

**Develop services** according to users' needs in every segment while including architectural considerations.

Next IS Forum  
will be held on  
October 4

