Ecole Polytechnique Fédérale de Lausanne

Strategy for EPFL-SI

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Contributions from:
- Alain Wegmann
- 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
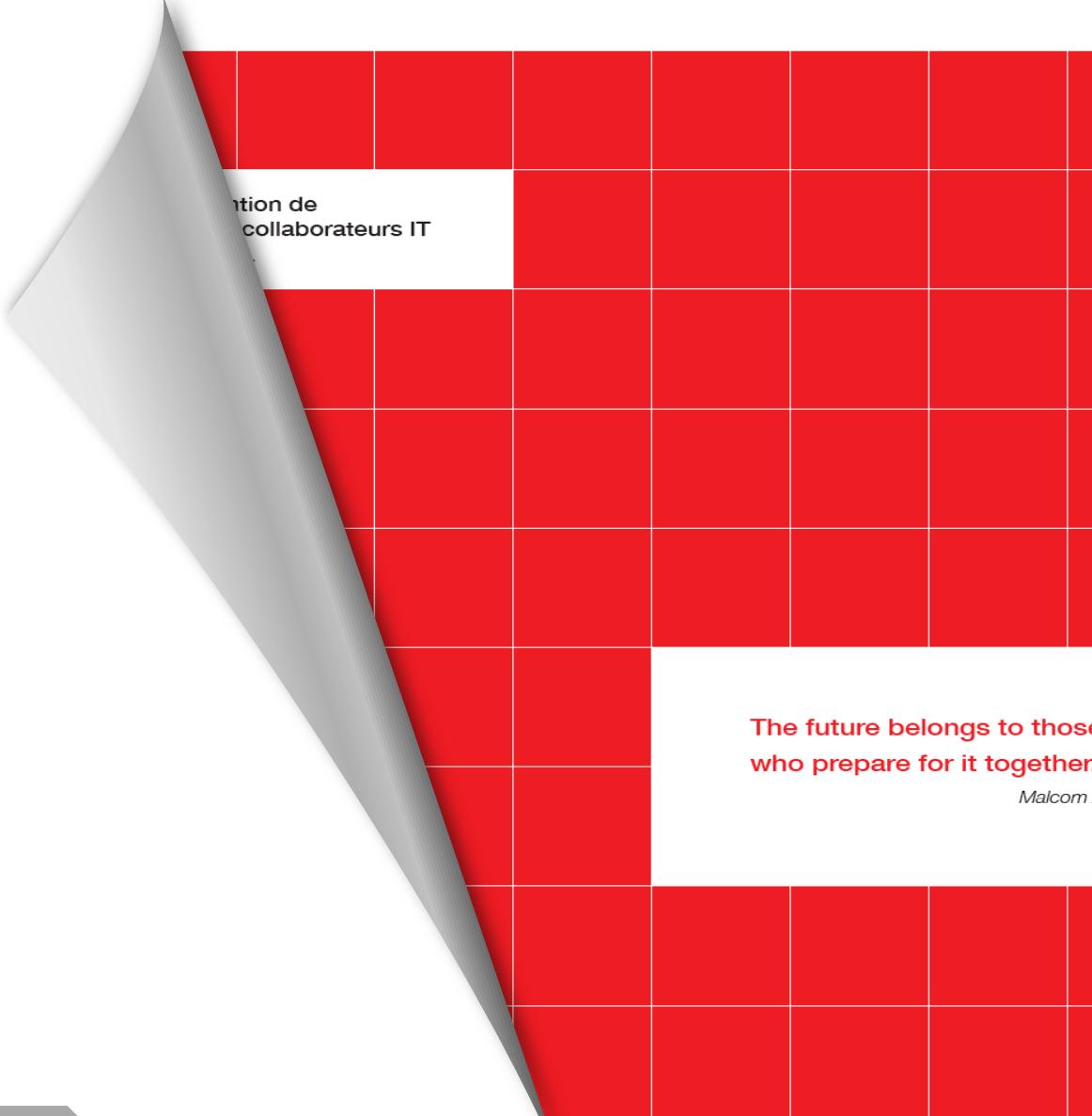
...ntion de
...collaborateurs IT

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 "

5 key challenges for EPFL IS

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.

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FÉDÉRALE DE LAUSANNE

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
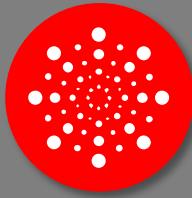
Collaboration and mutual understanding

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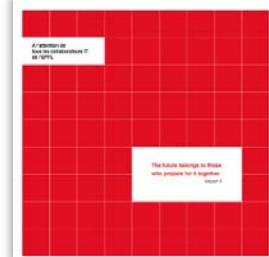
Summary

1 An example to illustrate concretely the strategy

↳ **From Projects**
to the Strategy of EPFL-SI

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

2 EPFL – SI

Example | Computer Classrooms Infrastructure Update

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?

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…

A lot of
infrastructure
(managed
by schools)

Co-development and knowledge sharing

Develop specific strategies

Definition of a language common to all the teams & the users
(using ITIL and Hermes best practices)

Co-development and knowledge sharing

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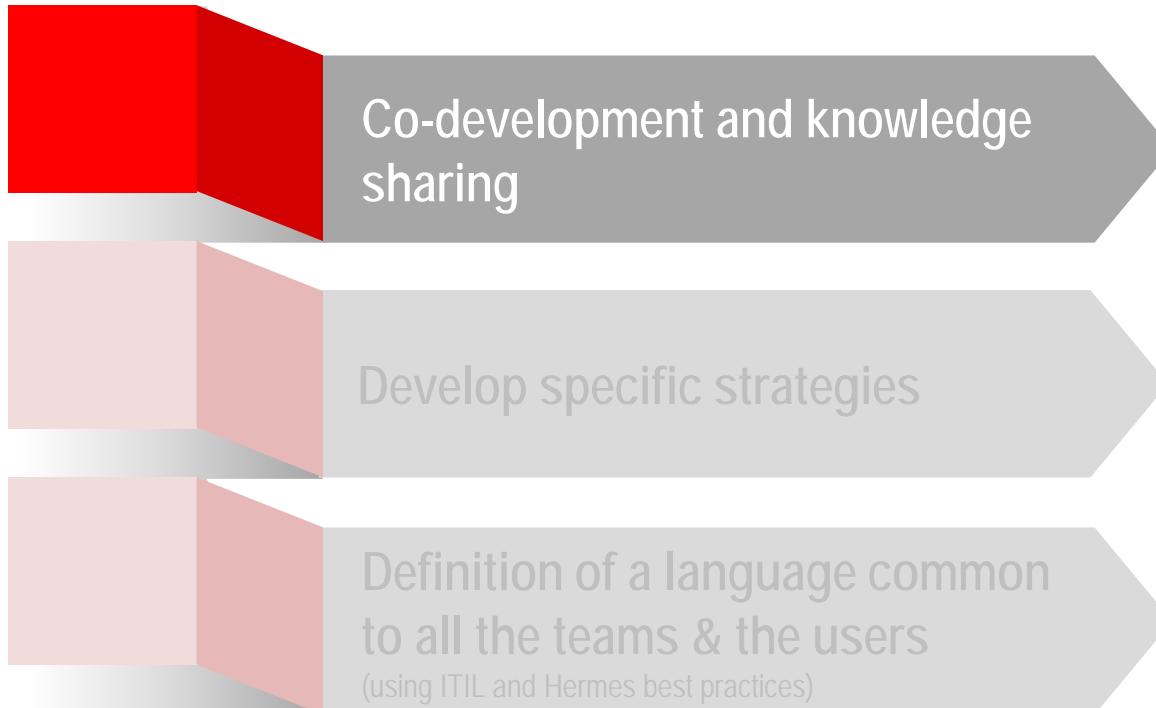
The VDI Project -
the Design of an Infrastructure

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
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Paulo De Jesus (ENAC)
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Eric Krejci
Project mgr

Daniel Perret
Service mgr

?
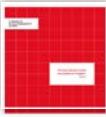
Mobile Platforms	Virtualisation And Cloud	Integration Technology (e.g. ESB)

Technologies of Choice (Architecture)
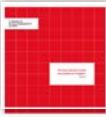
Mobile Platforms

Virtualisation And Cloud

Integration Technology (e.g. ESB)

Technologies of Choice (Architecture)

Example

The VDI Project - Architecture "Validation"

Approx.
25 computer
classrooms

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

The choice taken matches the overall EPFL-SI strategy.

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Eric Krejci
Project mgr

Daniel Perret
Service mgr

Giorgio
Anastopoulos
Architect

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Definition of a language common to all the teams & the users
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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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classrooms

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Project mgr

Daniel Perret
Service mgr

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Service

=

value for the users
without the risks and costs
of the implementation [ITIL]

Services

Definition of the VDI (Technical) Service

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.

Approx.
25 computer
classrooms

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Service factory

Eric Krejci
Project mgr

Daniel Perret
Service mgr

vm
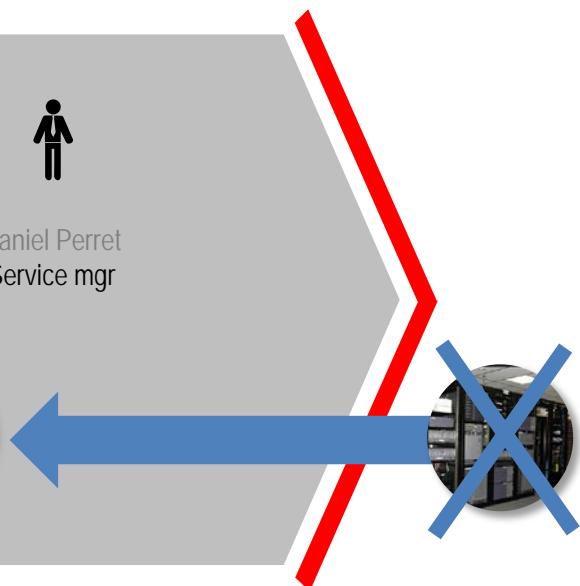
Example

Creation of the VDI (Technical) Service

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.

Approx.
25 computer
classrooms

Computer
Classroom
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Paulo De Jesus (ENAC)
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Carlos Perez (I&C)
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Service factory

VDI

Co-development and knowledge sharing

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Definition of a language common to all the teams & the users
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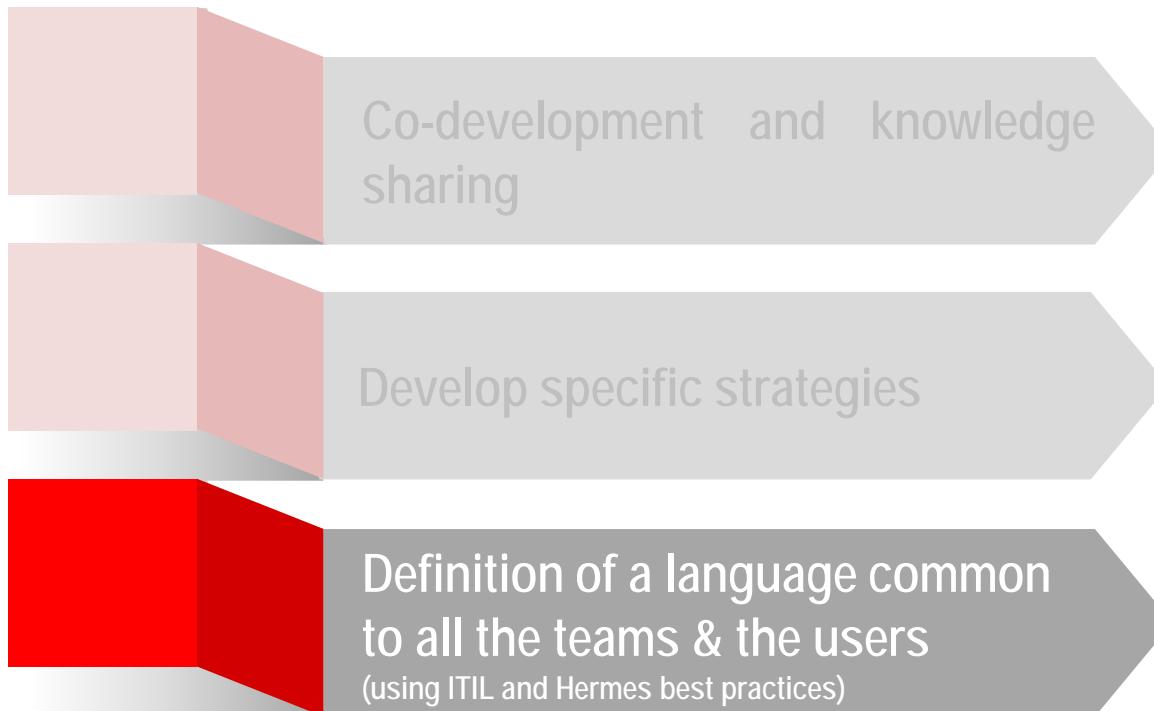
Designing (Business) User Interactions

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?

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…

Olivier Burdet
Teacher

and many others…

Nina Desnica
Student

and many others…

Service factory

VDI

EPFL
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FÉDÉRALE DE LAUSANNE

Service

=

value for the users
without the risks and costs
of the implementation [ITIL]

Services

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

Computer Classroom Administrators

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

VDI

Olivier Burdet
Teacher

and many others…

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Example

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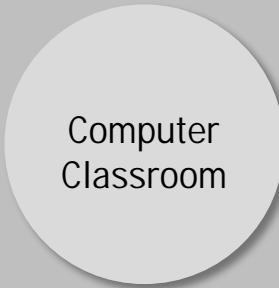
The teachers do not need to get involved in the implementation of the service, they benefit of the value of the service.

Schools
(ENAC, I&C, SV, SB, STI)

Computer Classroom

Olivier Burdet
Teacher

and many others…

Nina Desnica
Student

and many others…

Co-development and knowledge sharing

Develop specific strategies

Definition of a language common to all the teams & the users
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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!
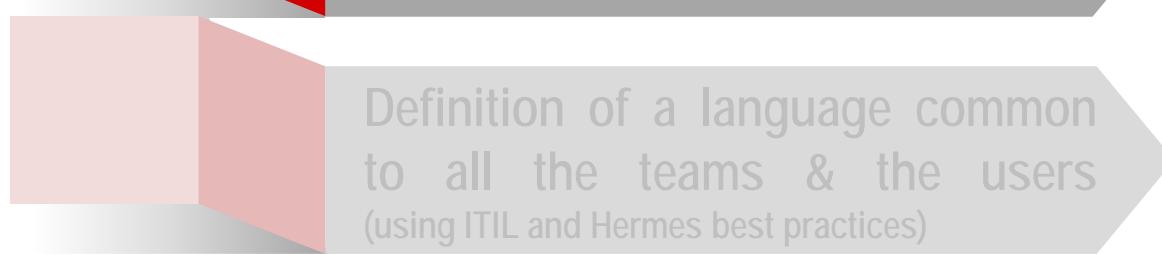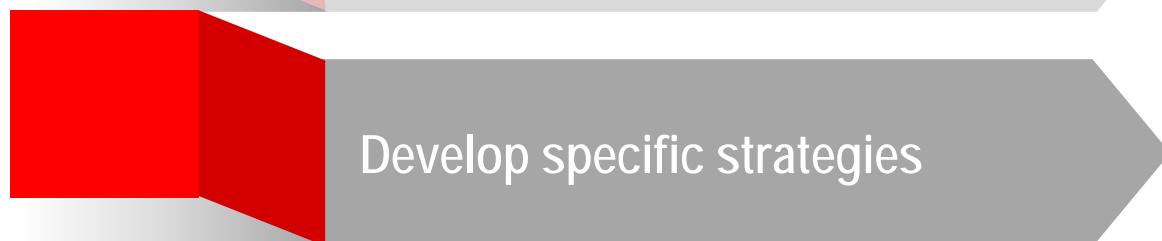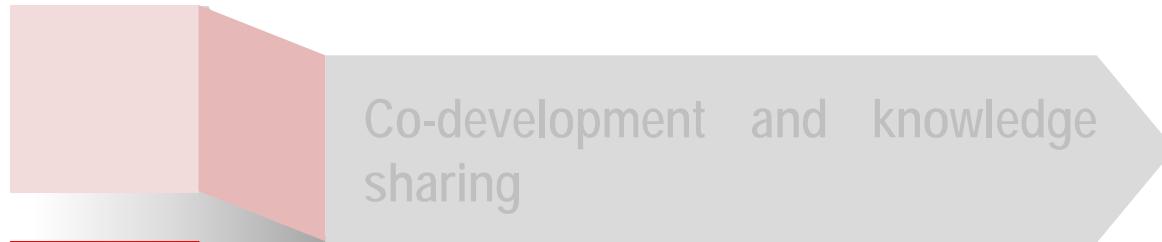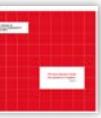
Schools
(ENAC, I&C, SV, SB, STI)

Computer Classroom

OGIF

Computer Classroom scheduling

Others

E.g. Multimedia Mgt

Laurent Ramelet
Segment mgr
teaching

Olivier Burdet
Teacher

and many others…

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
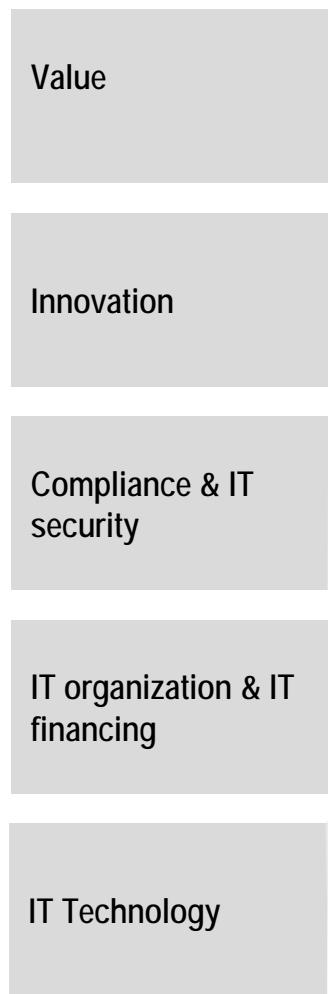
5 key challenges for EPFL IS

CHALLENGES

INTENTION

Challenge	Intention
Value	To bring value to users through IS services. ✓
Innovation	To boost EPFL innovation through IS services.
Compliance & IT security	To ensure legal and regulatory compliance together with security.
IT organization & IT financing	To coordinate actors in the IS service organization and to efficiently allocate resources. ✓
IT Technology	To respond to the IT technology revolution and take advantage of it. ✓

EPFL-SI

Summary

1 An example to illustrate concretely the strategy

2 EPFL – SI

Creation of Computer Classroom Services

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

and many others…

Nina Desnica
Student

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The way to work together

EPFL - SI

Human resources

Governance

Co-development and knowledge sharing

Develop specific strategies

Definition of a language common to all the teams & the users
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Services

Architecture strategy

| Mobile Platforms | Virtualisation And Cloud | Integration Technology (e.g. ESB) |

Technologies of Choice (Architecture)

Segment strategy

The Birth of EPFL-SI
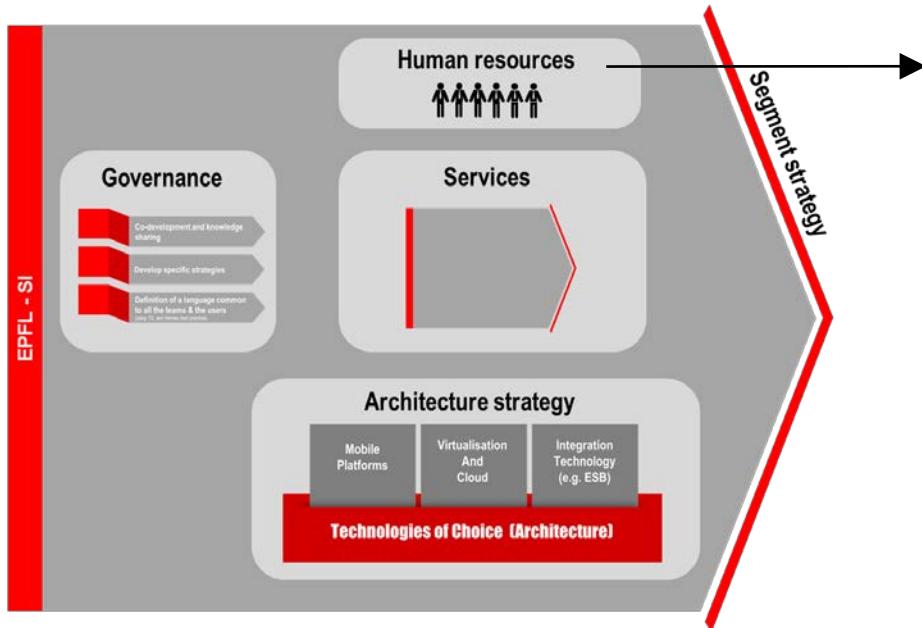
Human resources / members of EPFL-SI:

- 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

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

Sep 2014 – Dec 2014

Analysis of VPSI situation

Design of new **VPSI** organization

Sep 2015 – Dec 2015

First version of strategy

Agreement with **VPAA**, **VPRI**, **VPIV** on how IT people could work together

Based on shared projects

Yearly update of overall strategy

Development of specific strategies.

2014 | **2015** | **2016** | **Future**

Jan 2015 - Sep. 2015

Implementation at VPSI.

First draft of a strategy.

First contacts with schools.

Jan 2016 - Sep. 2016

Implementation of EPFL-SI in IT groups of VPAA, VPRI, VPIV.

Discussion with **schools** on their roles in EPFL-SI.

To Know More...

A l'attention de
tous les collaborateurs IT
de l'EPFL

The future belongs to those
who prepare for it together.

Malcom X

The Governance & Global Strategy of the EPFL – Information System

Table of Contents

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

EPFL IS: a new framework

ENVISION, DEVELOP and OPERATE TOGETHER ONE INFORMATION SYSTEM

EPFL-SI

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

THANK YOU
for your attention!