



Universitat Oberta
de Catalunya

Next Generation By Design: The Next Generation Integration Scorecard project

uoc.edu

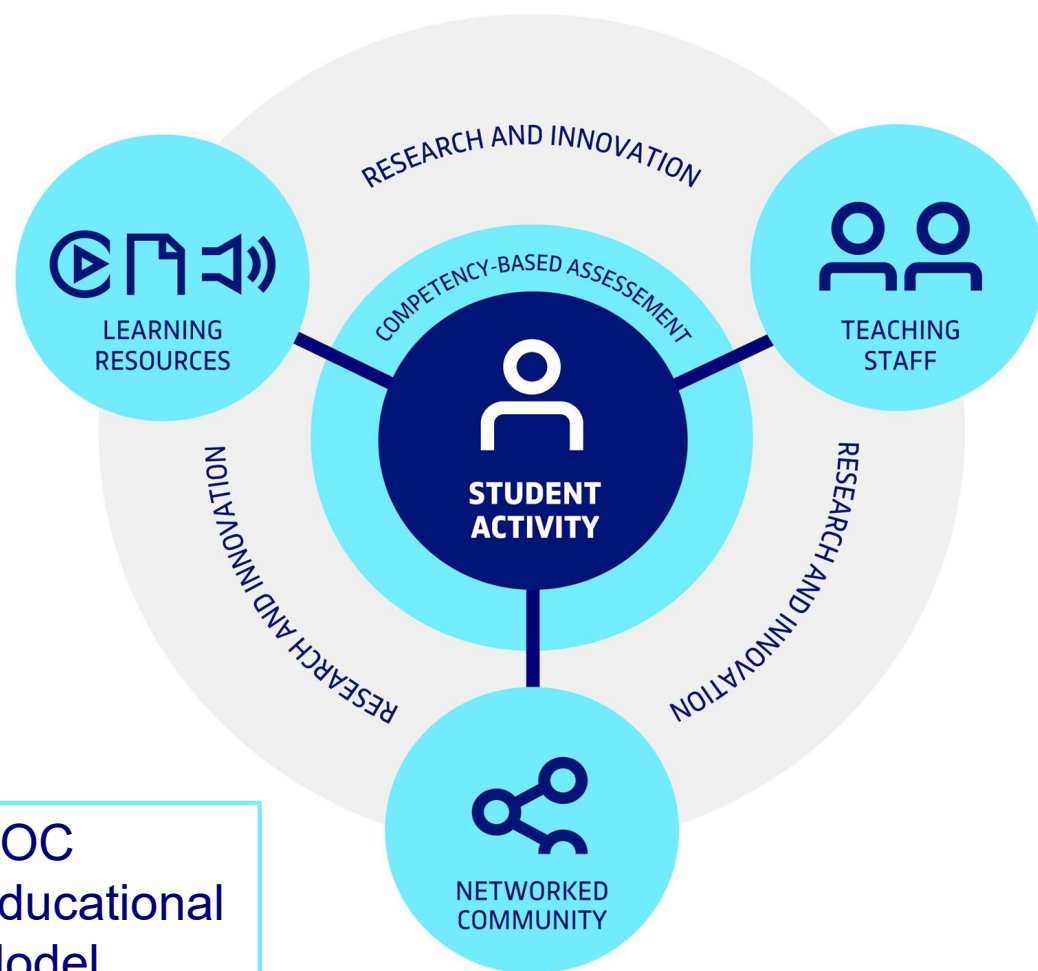
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01

Open University of Catalonia (UOC) – <http://www.uoc.edu>



UOC
Educational
Model

Online University

Started in 1995

Fully **online** from the beginning

70,274 students
71,598 graduates
562 faculty staff
3,991 Instructors

6,438 classrooms
600,000 online
interactions x day

27 bachelor's
degrees
76 master's
degrees
3 PhD's
271 postgraduates
& specializations

Online University
Started in 1995
Fully online from the beginning
70,274 students



Universitat Oberta
de Catalunya



R&I

eLearn
Center

eLearning Research and innovation center

Vision/strategy provider

Educational Model implementation and evolution

Support to research and innovation

eLearn Lab

Experiments, Proof of concepts, etc.

Infrastructure and developments



Unlock your digital information. Unleash *their* potential.

DXtera MISSION

To transform the way higher education does business and drive student success by providing efficient access to information.

Understanding the Business of Higher Ed

87%

Customized

50%

Before Y2K

Collaboration

Control

Student Success

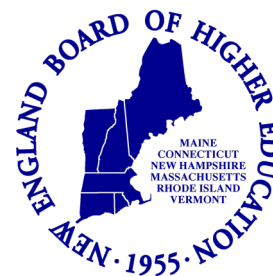
Members and Partners



Massachusetts
Institute of
Technology



Universitat
Oberta
de Catalunya



ACT® Center for
Equity in Learning



UNIVERSITY
of HAWAII®
SYSTEM



COMMUNITY COLLEGE
system of New Hampshire



Credential
Engine™



COMMUNITY AND TECHNICAL
COLLEGE SYSTEM OF WV



Making location count.



ONLINE LEARNING™
CONSORTIUM



Advancing Global Higher Education



New Hampshire College
& University Council



BÜNDNIS FÜR BILDUNG

LEARNTEC



SmartRepublic



EduCloud Alliance



Technical Services

Community Support

Solutions Development

Next Generation By Design (NGBD) Series

- Address market failures
- Solutions developed through collaborative demonstration projects
- Growing repository of solutions





Learn more at DXtera.org

UOC: DXtera membership & projects

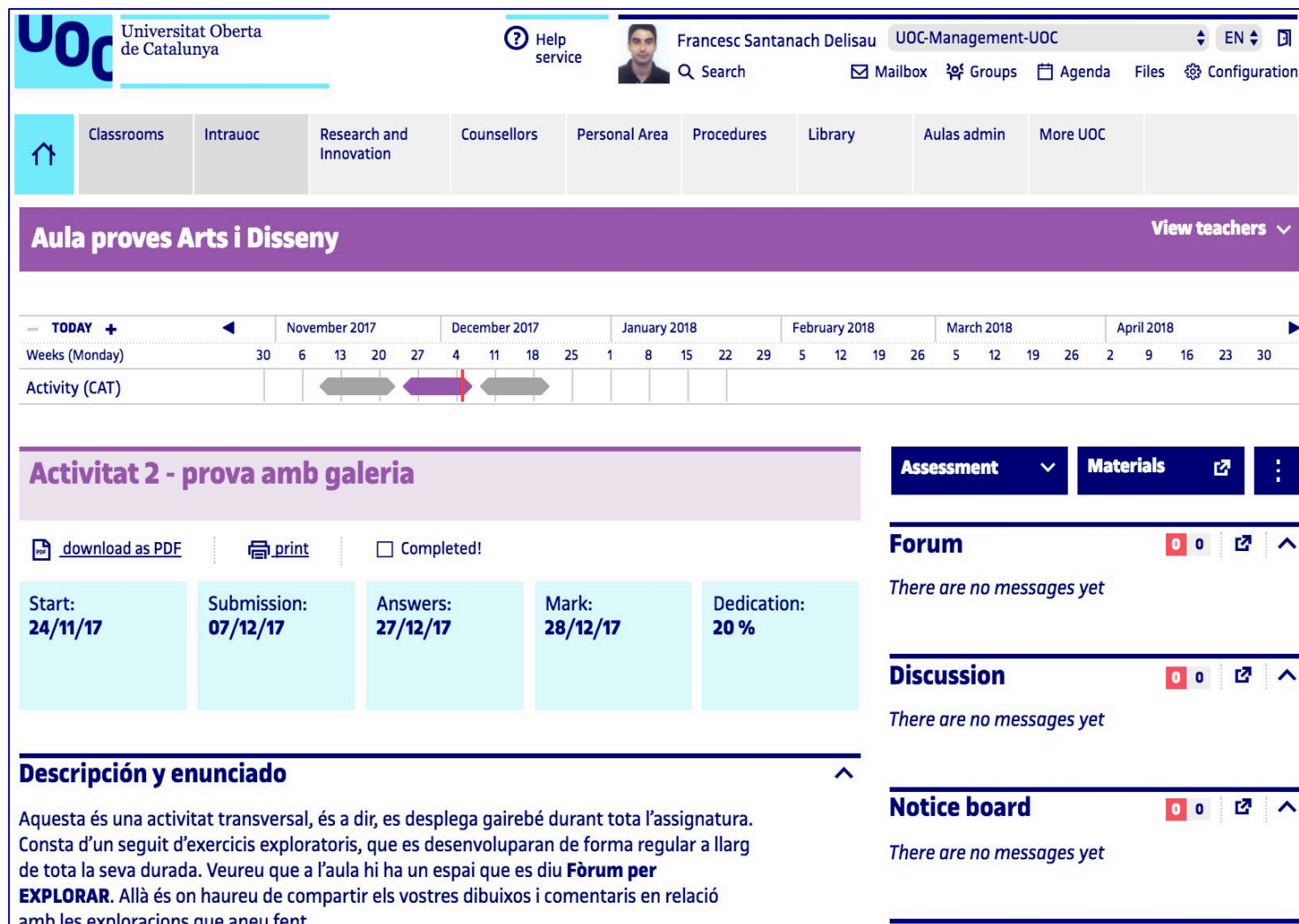


Founding Member
European HUB

Demonstration projects:
Integration Scorecard project
Chatbots for Education project

01

UOC Virtual Campus (Digital Learning Environment)



The screenshot shows the UOC Virtual Campus interface. At the top, there's a header with the UOC logo, the text 'Universitat Oberta de Catalunya', a user profile for 'Francesc Santanach Delisau', and navigation links like 'Mailbox', 'Groups', 'Agenda', 'Files', and 'Configuration'. Below the header is a main navigation bar with tabs for 'Classrooms', 'Intrauoc', 'Research and Innovation', 'Counsellors', 'Personal Area', 'Procedures', 'Library', 'Aulas admin', and 'More UOC'. The main content area features a purple banner for 'Aula proves Arts i Disseny' with a 'View teachers' link. Below this is a calendar view for November 2017, December 2017, January 2018, February 2018, March 2018, and April 2018. The calendar shows activity (CAT) for various weeks. The main content area also displays 'Activitat 2 - prova amb galeria' with options to 'download as PDF', 'print', and 'Completed!'. Below this are five boxes showing 'Start: 24/11/17', 'Submission: 07/12/17', 'Answers: 27/12/17', 'Mark: 28/12/17', and 'Dedication: 20 %'. The bottom section is titled 'Descripción y enunciado' and contains a paragraph of text in Catalan. On the right side of the interface, there are tabs for 'Assessment' and 'Materials', and a 'Forum' section with 'Discussion' and 'Notice board' subsections, each showing 'There are no messages yet'.

+20 year old DLE
A mix of technologies
Build from scratch

Ecosystem
66 tools and applications
Innovative & functional
but hard to maintain

Now, in transition to
Commercial/third-party
DLE solutions

02

NewDLE project: A new Digital Learning Environment for UOC



Reduce the complexity

Step forward to the cloud

Next step: innovation !!

02 UOC Virtual Campus

- 1 Classroom
- 1^{CA} Activity-centered classroom
- 2 Widgets Page
- 3 External space
- 3^{Ex} Academic Record space
- 3^B Library space
- 4 Search Engine
- 5 External tool
- 6 Calendar
- 7 File Storage tool



The screenshot shows the UOC Virtual Campus interface. At the top, there is a header with the UOC logo, the name 'Universitat Oberta de Catalunya', and the user profile of Francesc Santanach Delisau. Below the header is a navigation bar with various icons and labels, each with a numbered annotation: 'Aules' (1), 'Intrauoc' (3), 'Recerca i Innovació' (3), 'Tutoria' (3), 'Espai personal' (3^{Ex}), 'Tràmits' (3), 'Biblioteca' (3^B), 'Aulas admin' (3), and 'Més UOC' (3). To the right of the navigation bar are links for 'Servei d'atenció' (3), 'Cerca de persones' (4), 'Bústia' (5), 'Grups' (1), 'Agenda' (6), 'Fitxers' (7), and 'Configuració'. Below the navigation bar is a section titled 'Aula proves Arts i Disseny' (2) with a sub-section 'Professor/a col·laborador/a' (1^{CA}) and a list of collaborators. To the right of this section is a 'Grups de treball' (1) section with a list of groups: 'Laboratori Experimentació eLearn' (0) and 'Present@-Transit' (0). Below this is a 'Sales de gestió' (1) section. To the right of the 'Grups de treball' section is an 'Actualitat UOC' (3) section with a list of news items: 'Notícies' (3), 'Latest decisions made by the Executive Board: December 2017', 'Obrim noves edicions dels MOOC de Business Intelligence i de Gamificació', and 'Presentació d'OuterEDU: "L'educació del futur a debat: distopia o utopia?"'. The bottom of the interface shows a 'Sales' (1) section with a list of sales.

02

UOC Virtual Classroom

1^{CA}

Activity-centered
classroom

2

Widgets page

4

Search Engine

6

Calendar

8

Learning Activity

9

Continuous Assessment
Record - CAR (RAC)

10

Content Management
System (CMS)

11

Forum tool

Aula

Edició de l'aula

Canvia d'aula

1^{CA}

visualitza els professors coHaboradors

6

AVUI

desembre 2017

gener 2018

febrer 2018

març 2018

abril 2018

maig 2018

8

Setmanes (Dilluns)

27

4

11

18

25

1

8

15

22

29

5

12

19

26

5

12

19

26

2

9

16

23

30

7

14

21

28

8

Activitat (PAC)

8

Activitat 3 - prova amb el Present@

Baixa en PDF

Imprimeix

Completada!

Inici:

08/12/17

Lliurament:

21/12/17

Solució:

11/01/18

Qualificació:

22/01/18

Dedicació:

30 %

9

Avaluació

Materials

11

Fòrum

Encara no hi ha cap missatge

11

Debats

Encara no hi ha cap missatge

11

Tauler

Encara no hi ha cap missatge

4

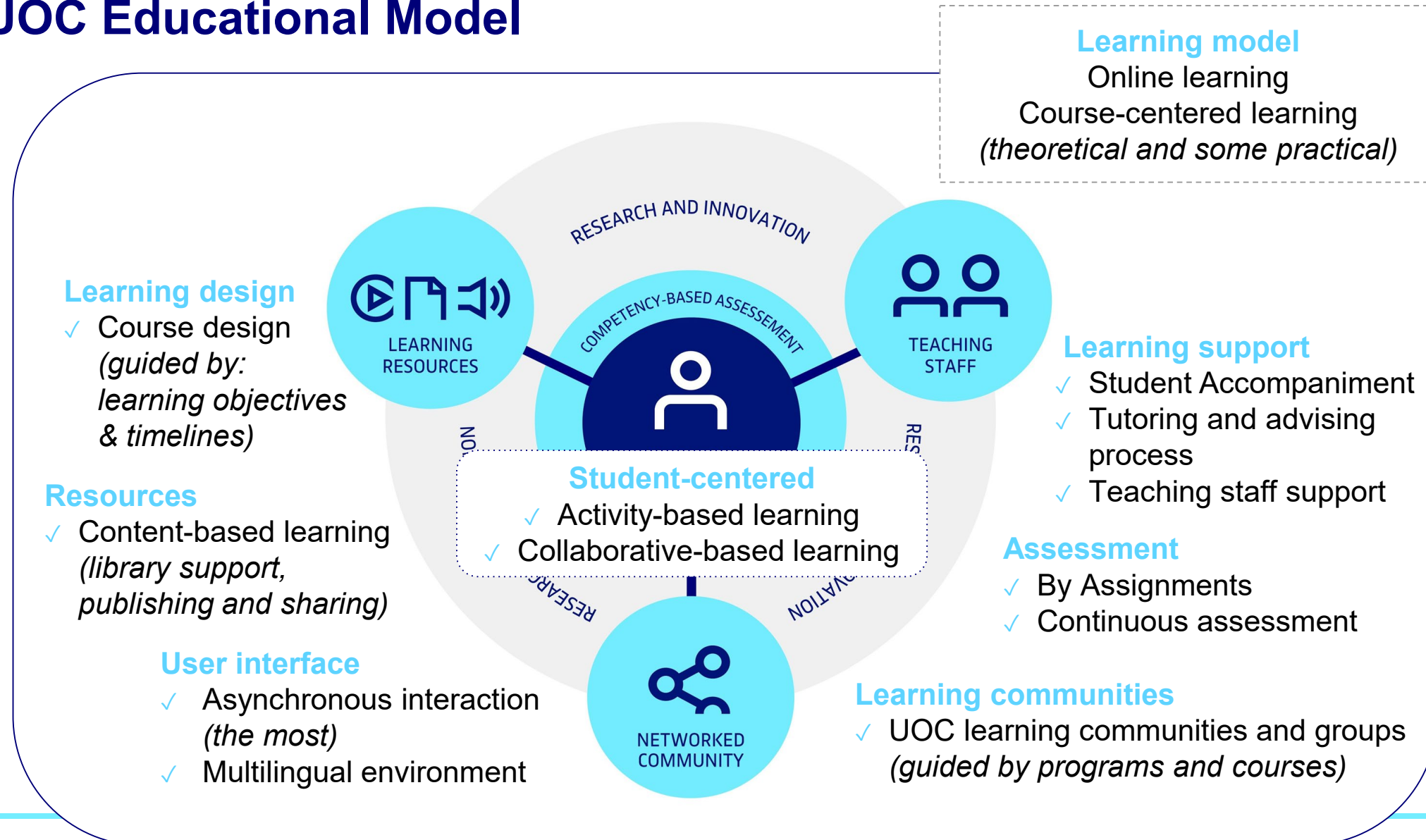
Participants

02

NewDLE project:**DLE is more than a LMS. Many dependencies****Boundaries are not clear****DLE in the center and
related to most of the
other systems ...**

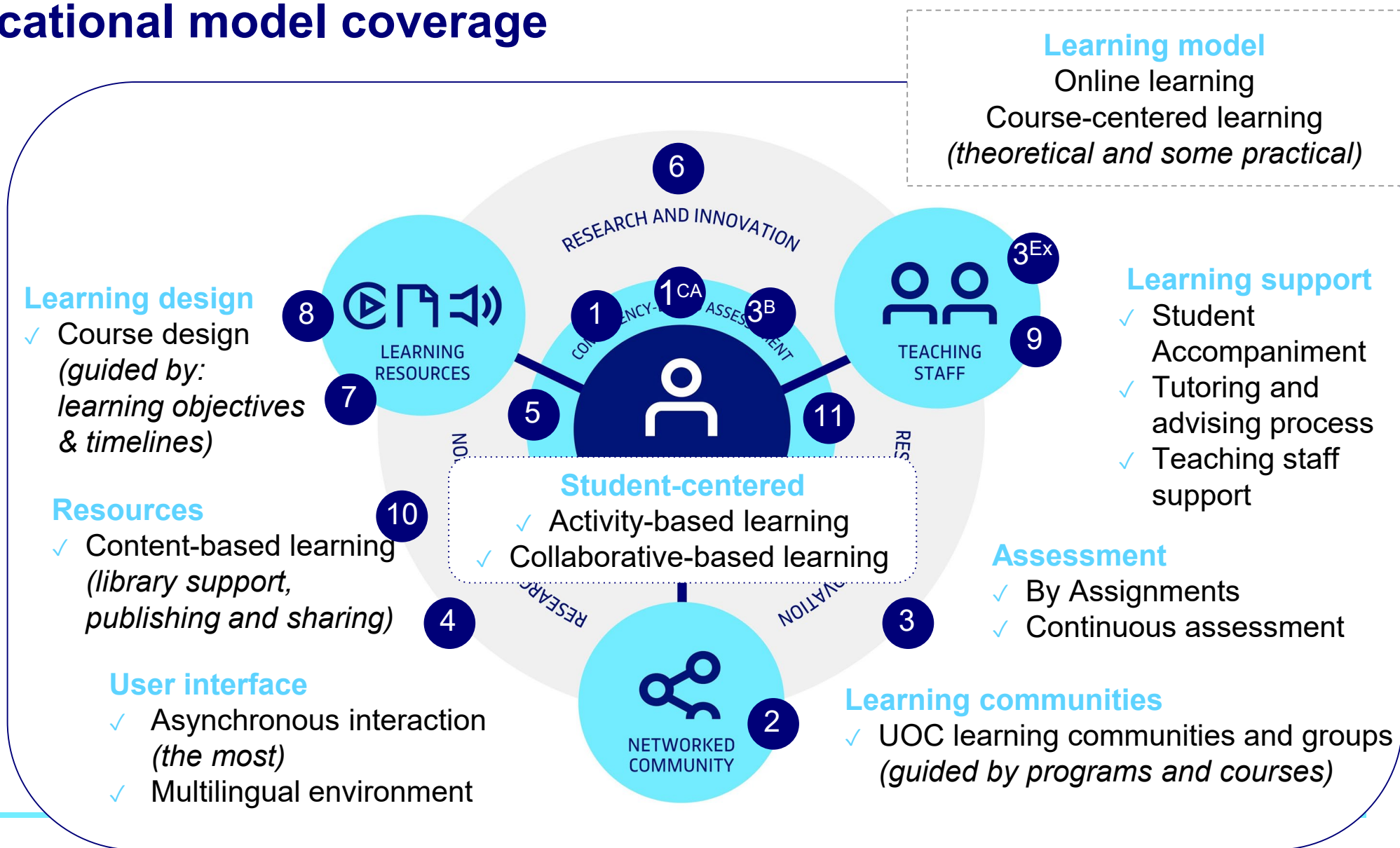
02

UOC Educational Model



02 UOC Educational model coverage

- 1 Classrooms
- 1^{CA} AC classroom
- 2 Widgets page
- 3 External space
- 3^{Ex} AR space
- 3^B Library space
- 4 Search engine
- 5 External tool
- 6 Calendar
- 7 File Storage tool
- 8 Learning Activity
- 9 CAR (RAC)
- 10 CMS
- 11 Forum tool



02

NewDLE project: Improvements & transformation project

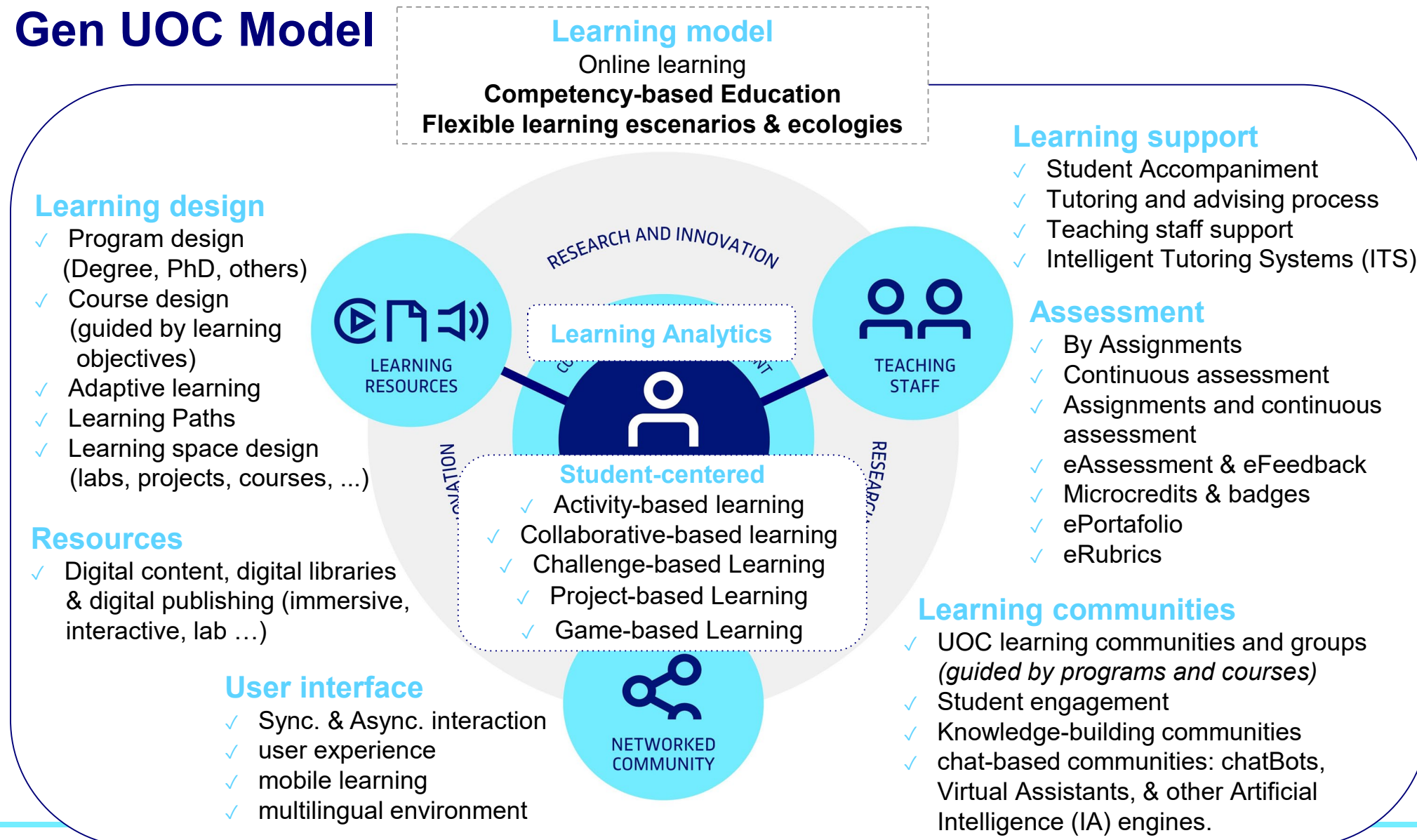
This is more than just a replacement ... we need to improve the system ...

We cannot avoid the opportunity to transform the institution ...

From the user's point of view this is a big change but no changes at all ...

02

Next Gen UOC Model



02

**5 years long project and high cost ... and at the same time ...
Software is always changing !!!**



Technology in digital world has
been changing many times
faster than in physical world



Project would be like this ...

02

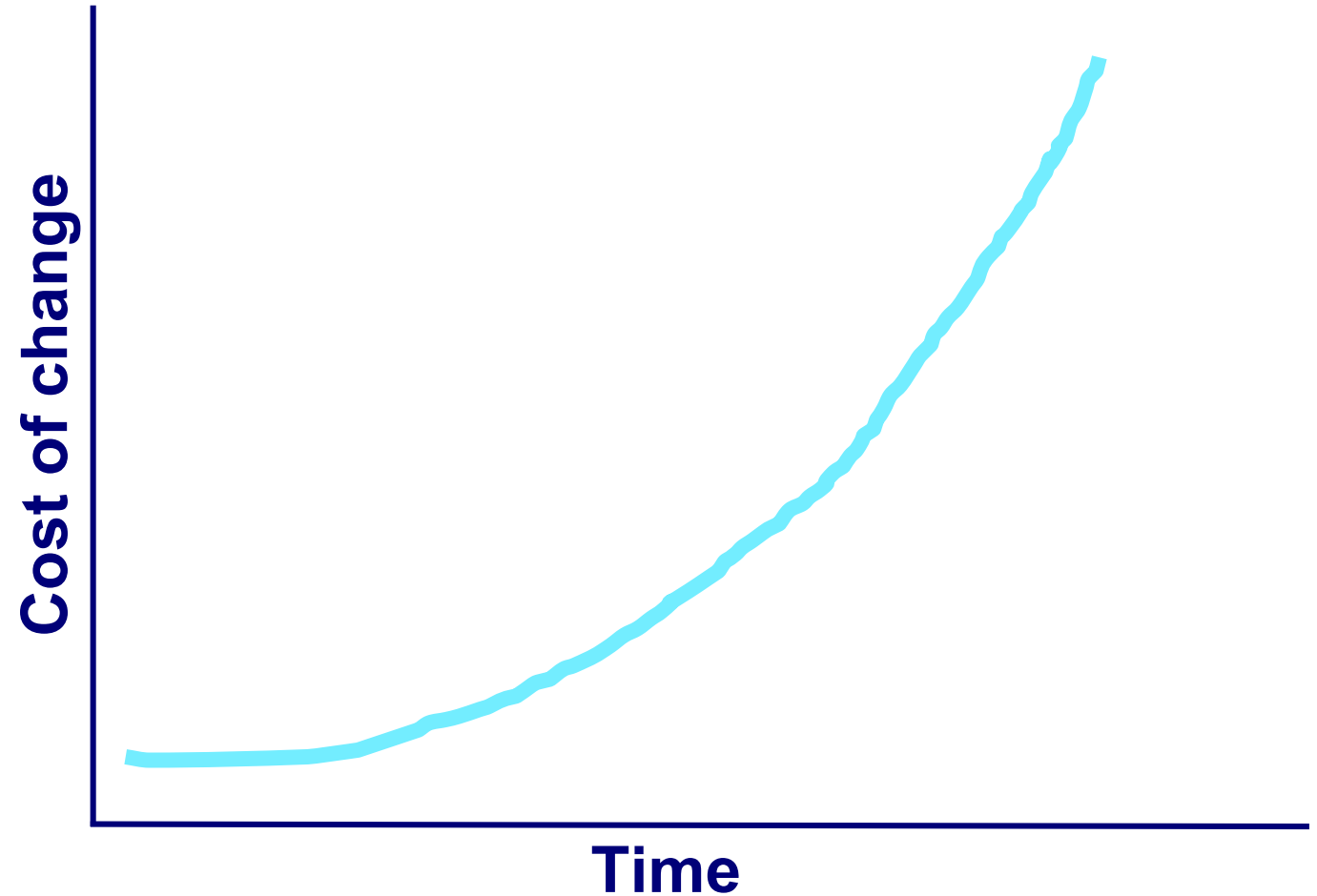
NewDLE project:**Requirements, Improvements; transformation; changes issues ...**

02

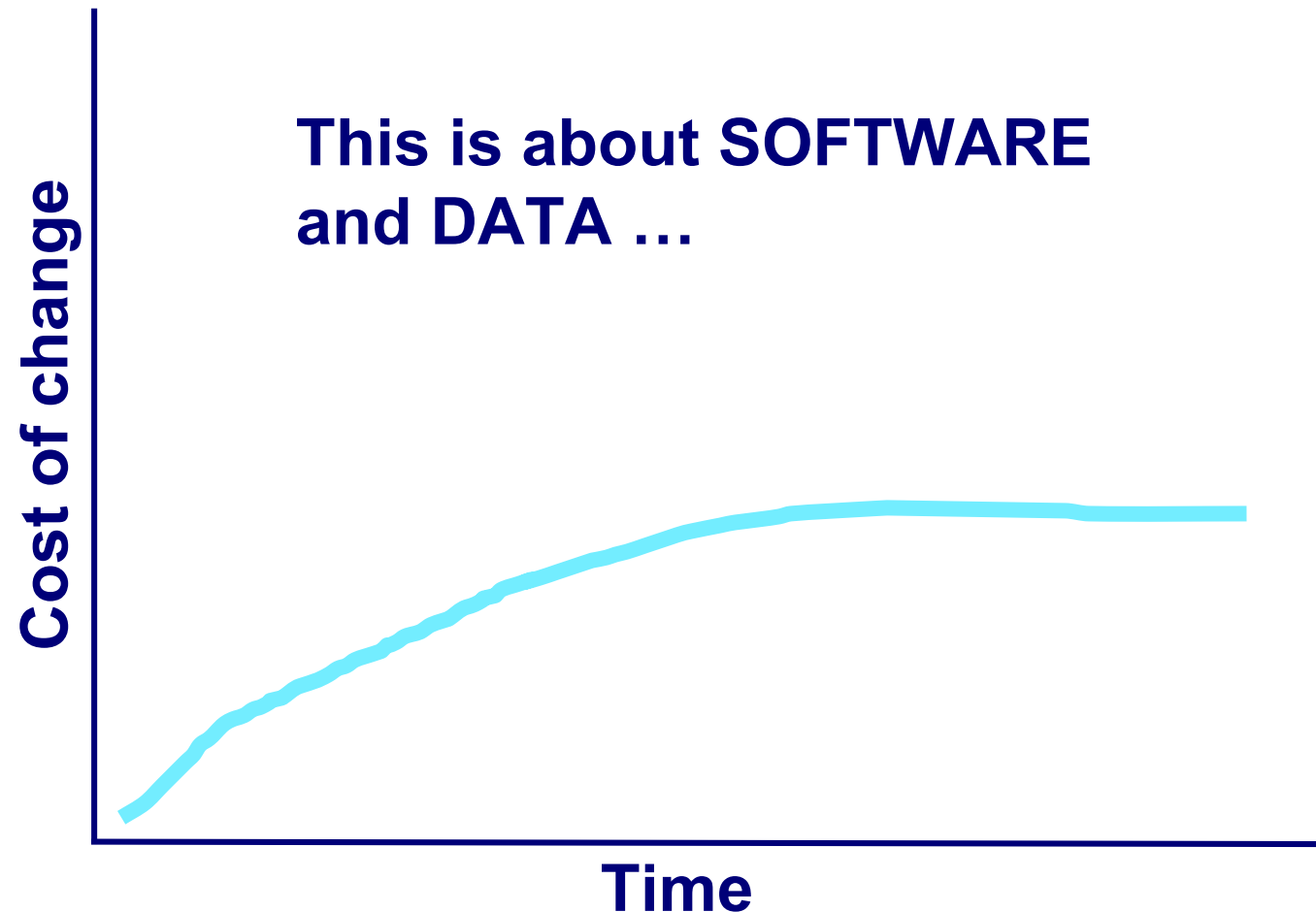
PROBLEM: Classic product development process



Dr. Màrqueting.



03

SOLUTION: Other way to approach the projects

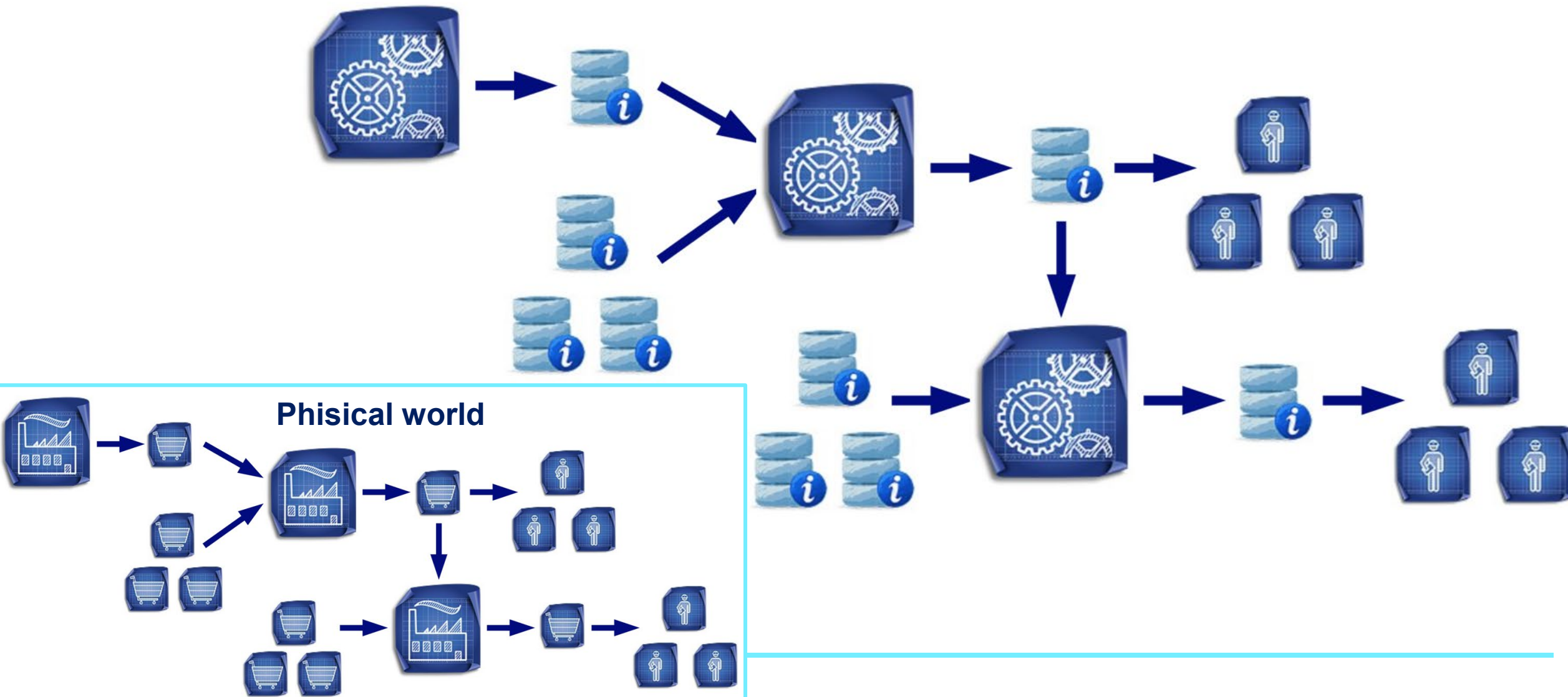
**Software industry has
been changing in this
way:**

- **Object Oriented**
- **Software patterns**
- **Agile manifesto**
- ...

**Incremental and
continuous projects**

03

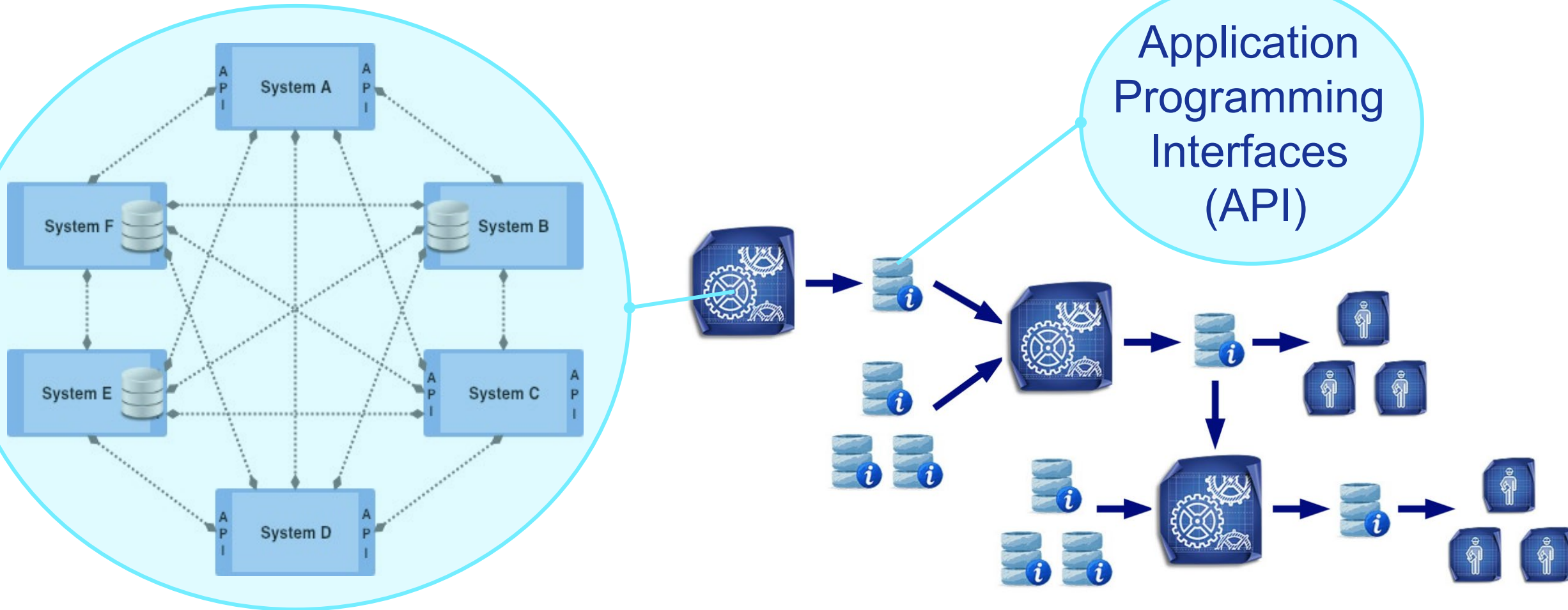
Digital world business models



03

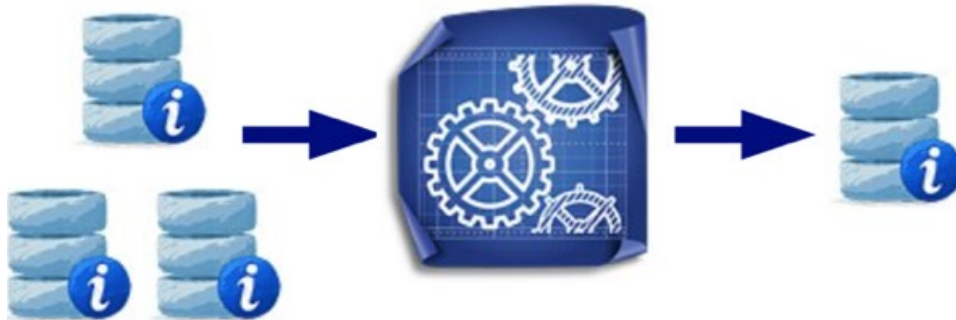
DXtera Integration Scorecard.

Minimum set of information to manage my business



03 DXtera Integration scorecard: Select good software products

Flexibility means Integrability



Level 0:

No programmatic support

Level 1:

Underlying persistence technology documented and developer support provided

Level 2:

Application Programming Interfaces (APIs) documented and supported

Level 3:

All applications use the API

03 DXtera Integration Scorecard Workshops



Level 0:

No programmatic support

Level 1:

Underlying persistence technology documented and developer support provided

Level 2:

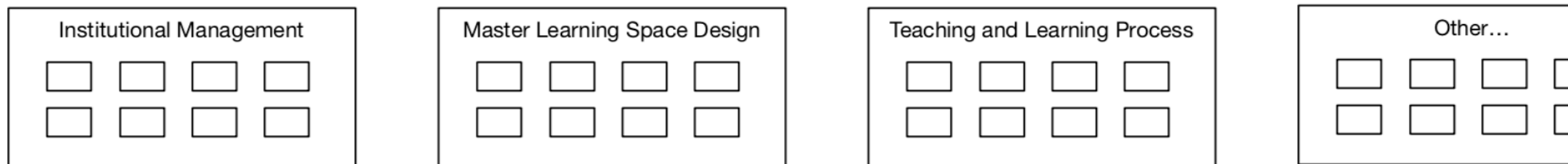
Application Programming Interfaces (APIs) documented and supported

Level 3:

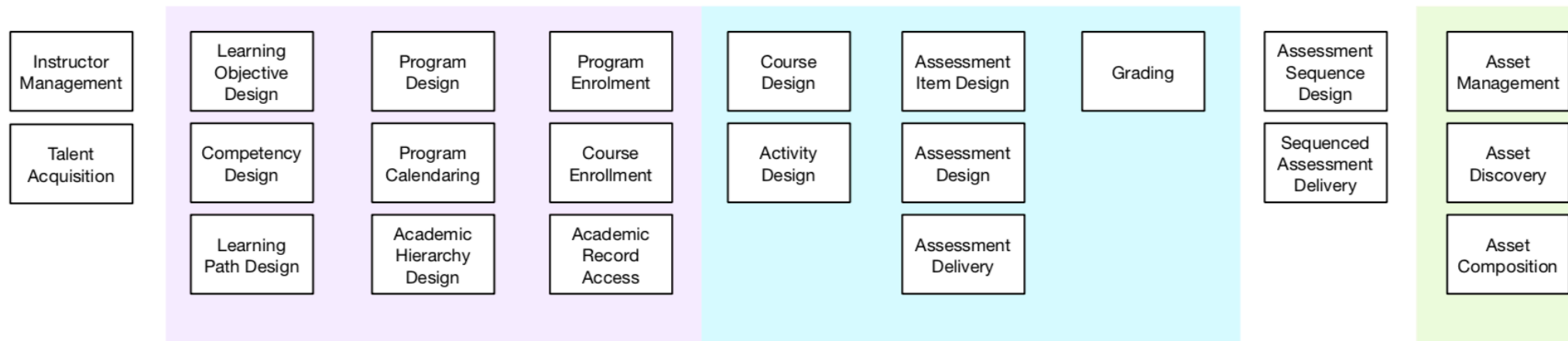
All applications use the API

User Experiences (LMX - Provide user context and orchestrate / configure Applications)

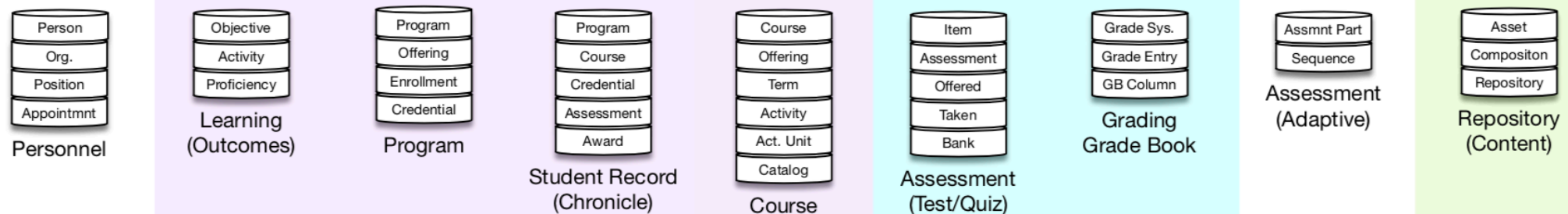
DRAFT



Applications (These should map to the Application Requirements section for each Functional Group)



Persistence (These map to the Functional Group documents which are informed by the OSID models. These would ideally be exposed as EIS)



Typical Functionality of SIS

Typical Functionality of LMS

Typical Functionality
of CMS




03 DXtera Integration Scorecard. RFP documents

GET /courses/{courseId}	Get the course
Response 200 Course Object	
Response 401 Unauthorized	
Response 404 Not found	
Needed: YES/NO as a Consumer: YES/NO as a Provider: YES/NO	
Implementation (please complete with your strategy or intern API calls):	

{ API : UOC }

POST /courses/{courseId}	Create a new course
Response 200 The Course has been created	
Response 401 Unauthorized	
Needed: YES/NO as a Consumer: YES/NO as a Provider: YES/NO	
Implementation (please complete with your strategy or intern API calls):	

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 @uocuniversitat

Thank you!

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eLearn Center - Lab

Universitat Oberta de Catalunya – <http://www.uoc.edu>
