

# LPSS Learning and Performance Support System

Information & Communications Technologies (ICT) Portfolio

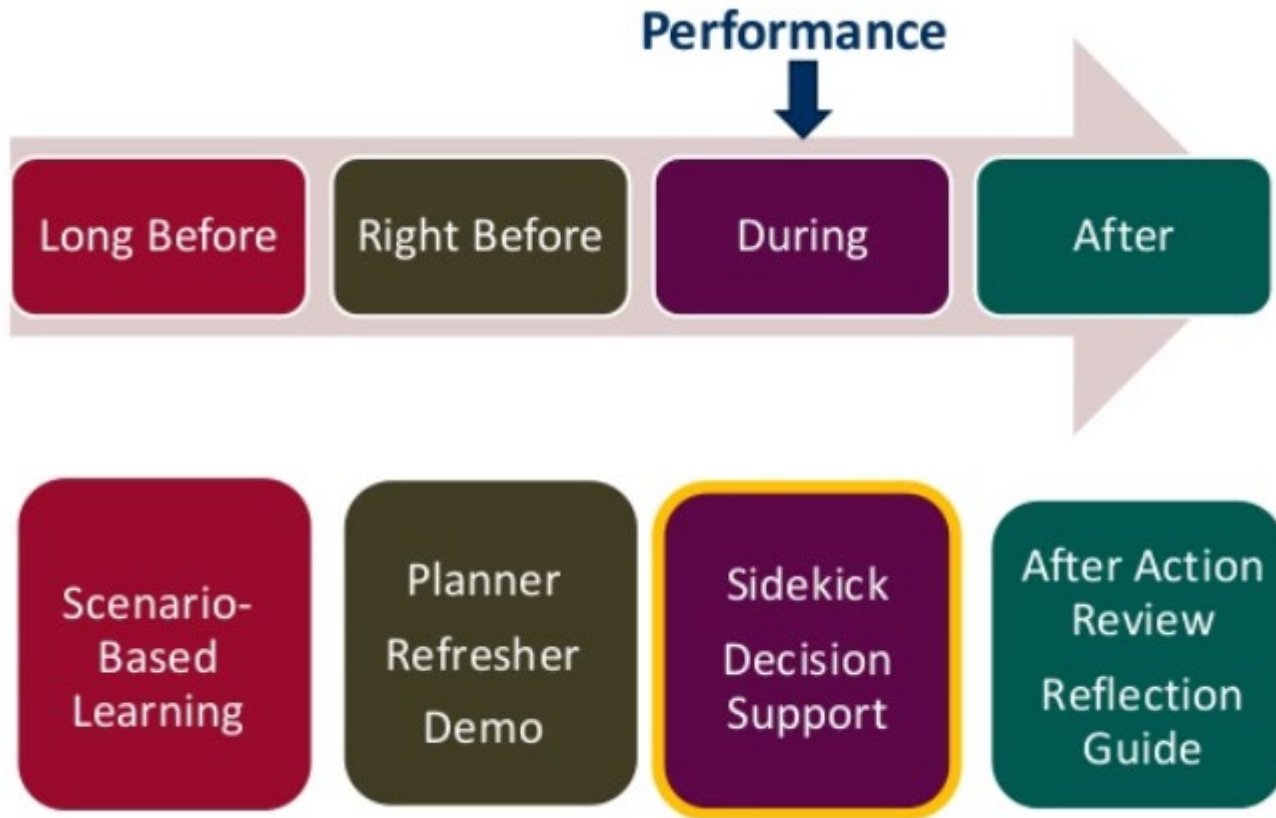
Stephen Downes

LPSS Program Leader

April 28, 2015

[Stephen.Downes@nrc-cnrc.gc.ca](mailto:Stephen.Downes@nrc-cnrc.gc.ca)

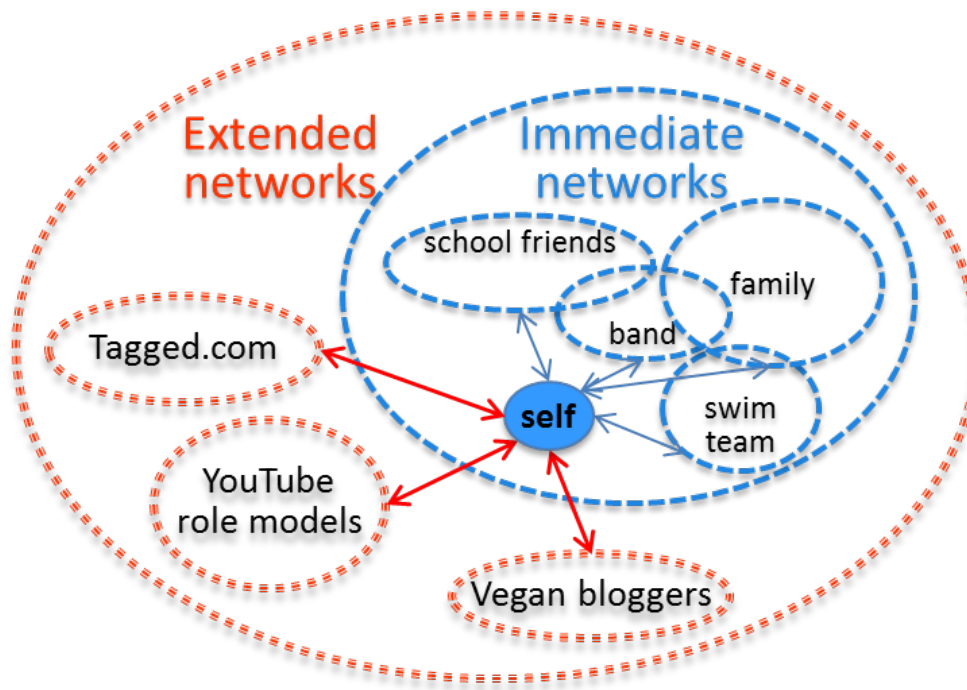
# Performance Support



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# Learning in Context



Informal learning opportunities via extended networks

Task-Focused  
Network-based

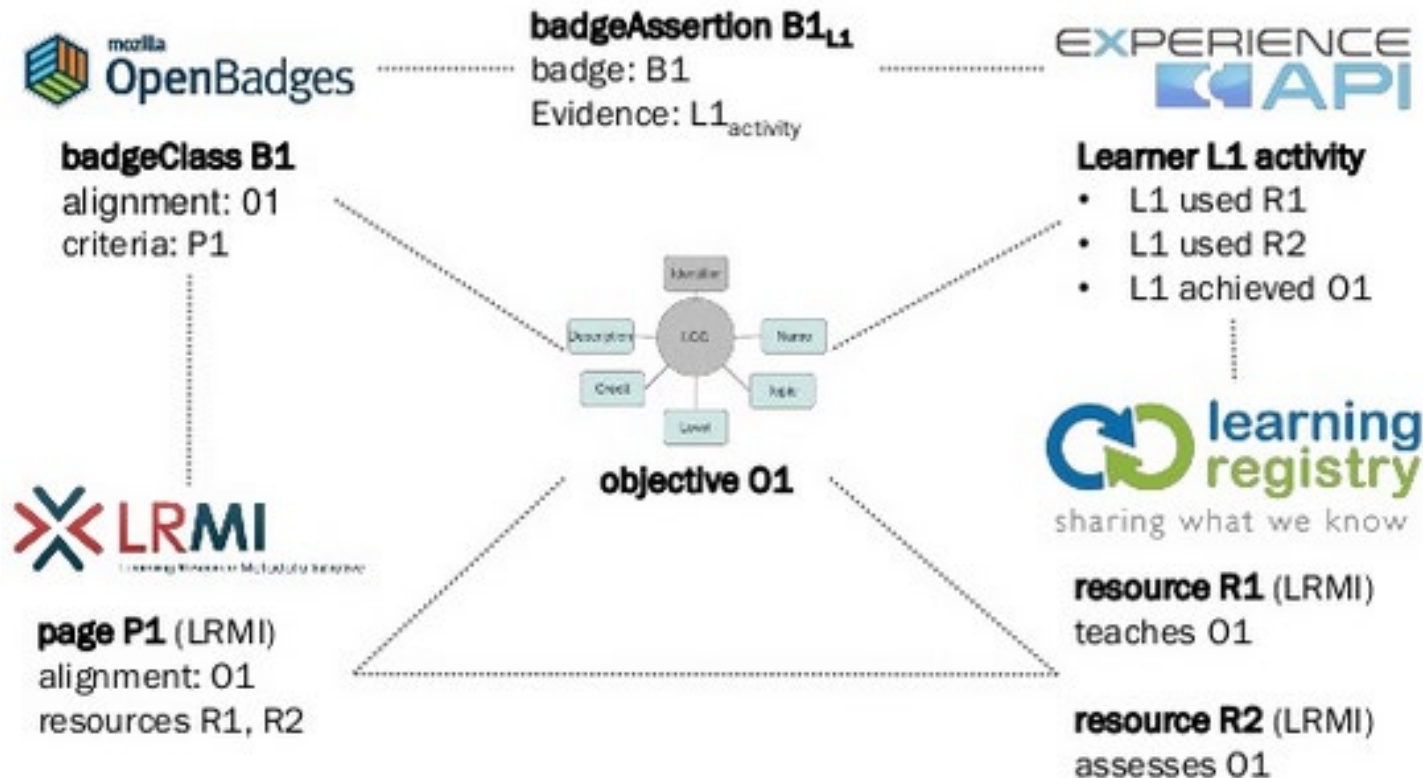
# The Solution: Personal Learning and Performance Support

Single point of  
access to all skills  
development and  
training needs

- Individual learning path
- Context-aware support
- Searchable and verifiable
- Tailored to industry needs
- Always available
- Point of need performance support

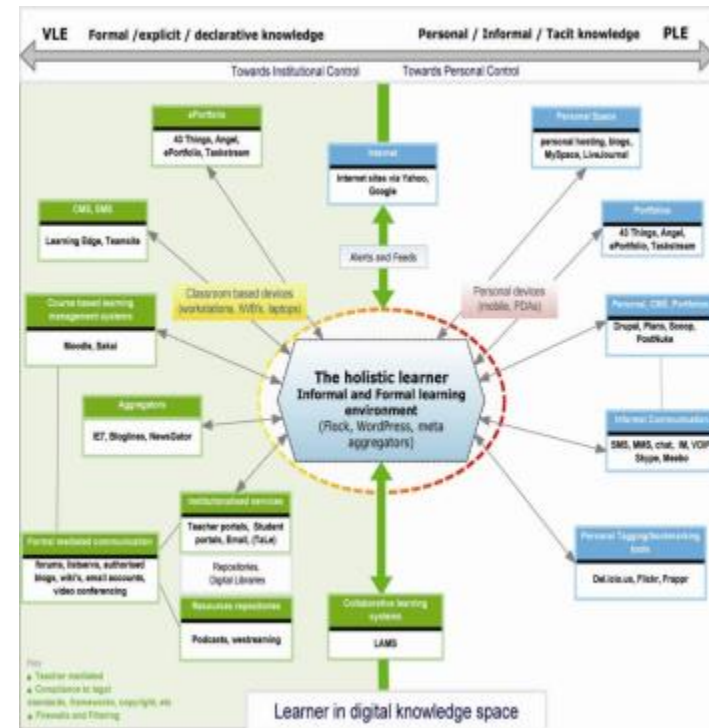
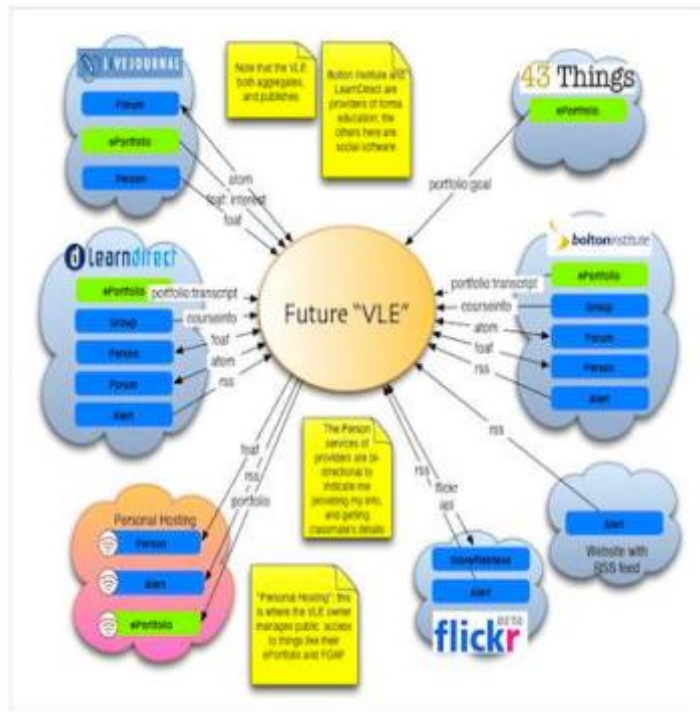


# Personal Assistant for Learning



<http://www.adlnet.org/adl-initiative-baa-new-submission-window-open-for-personal-assistant-for-learning-pal-proposals-2/index.html>  
<http://www.slideshare.net/damonregan/regan-tla-infrastructureforfutureoflearningsintice2013>

# The design is based on putting the learner at the centre



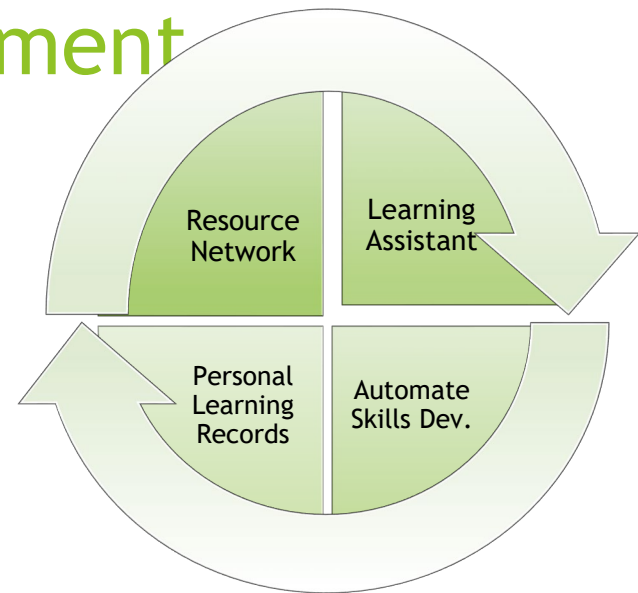
Scott Wilson (left), Tim Hand (right)

<https://www.google.com/search?q=ple+diagrams>

[http://www.edtechpost.ca/ple\\_diagrams/index.php/mind-map-3](http://www.edtechpost.ca/ple_diagrams/index.php/mind-map-3)

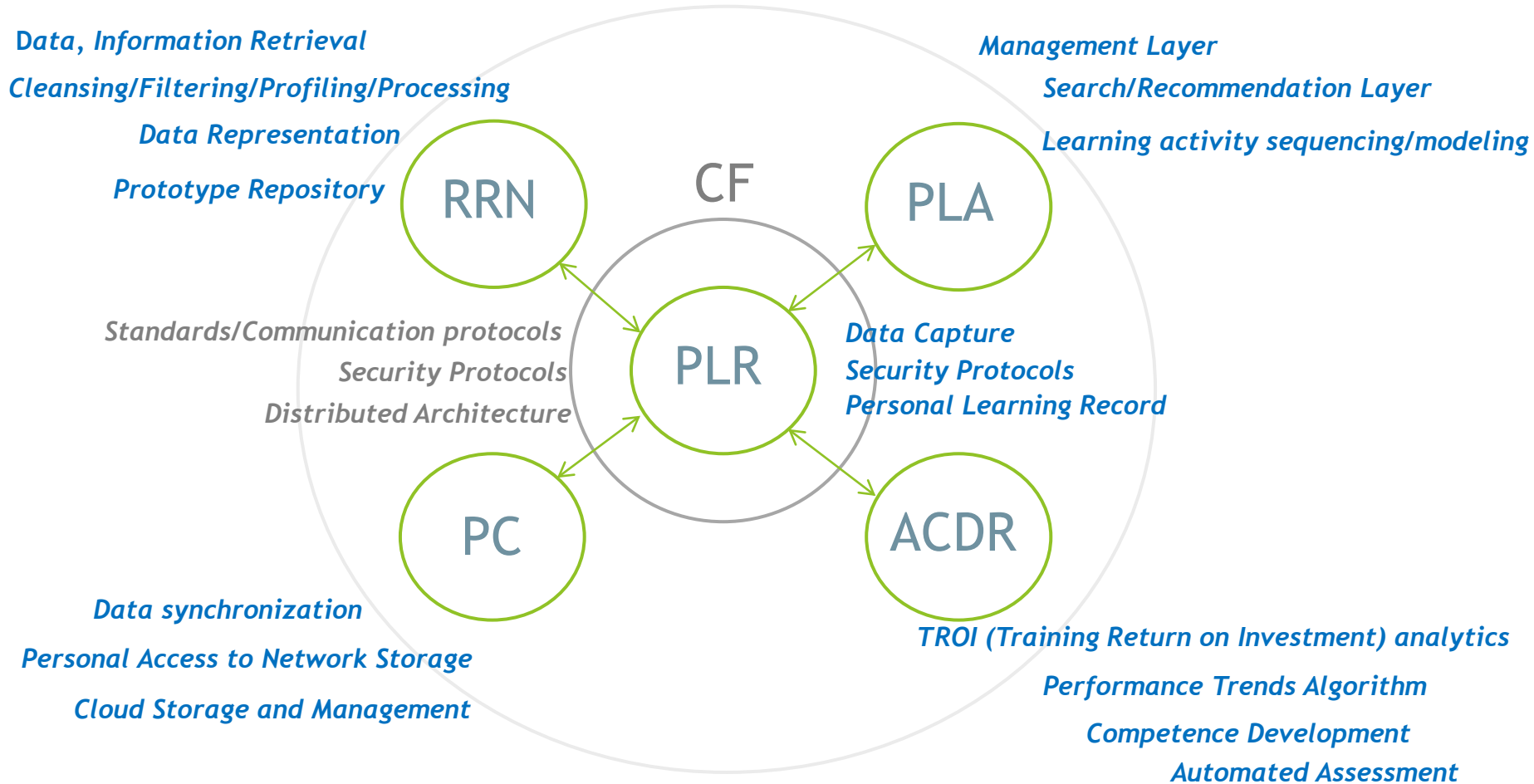
# Learning and Performance Support System: Core Technology Development Projects

- Learning services network and marketplace
- Automated skills development and recognition
- Lifetime management of learning and training records and credentials
- Personal learning assistant to view, update and access training

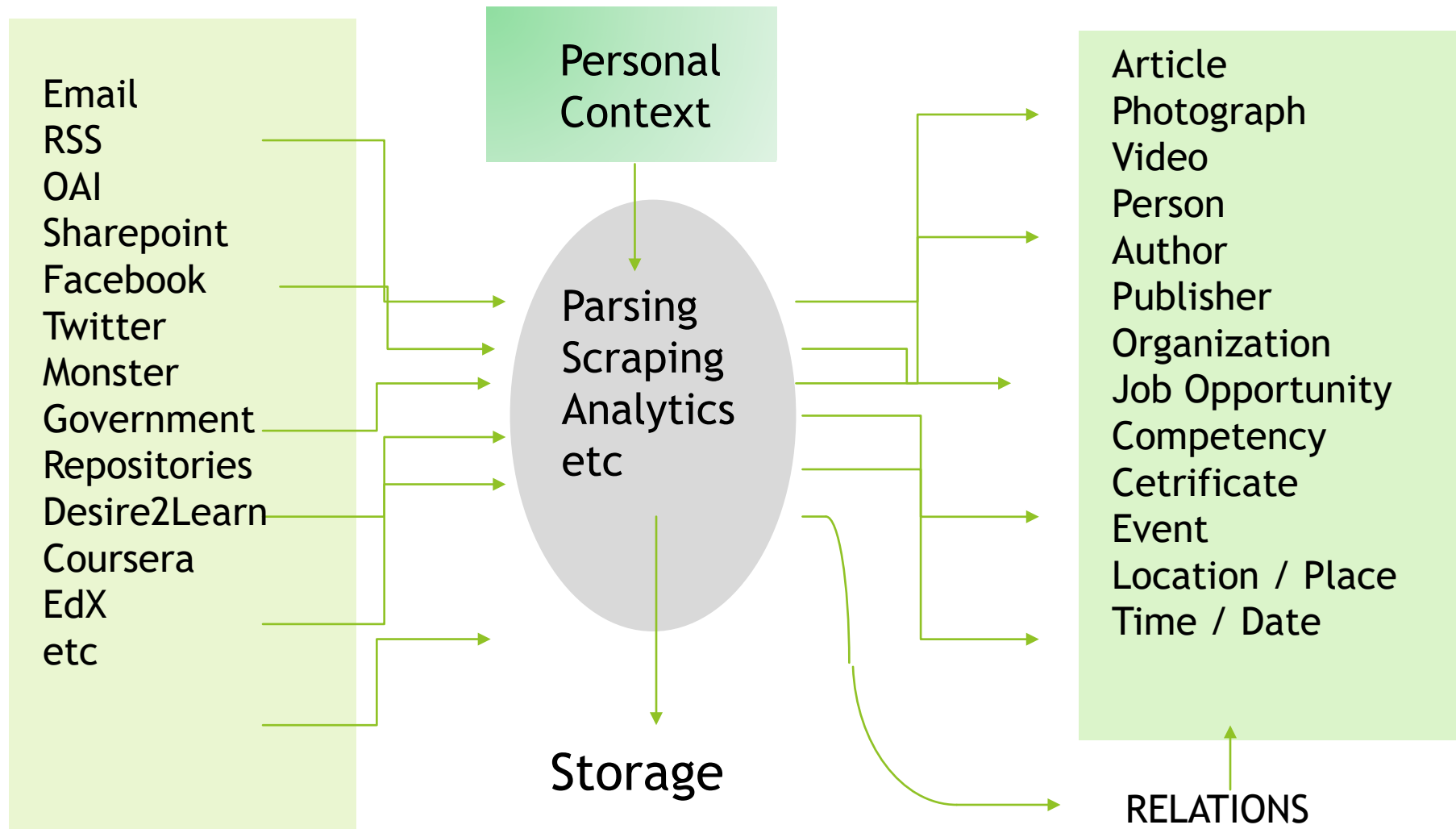


- Learning as a cloud service and deep integration with external systems

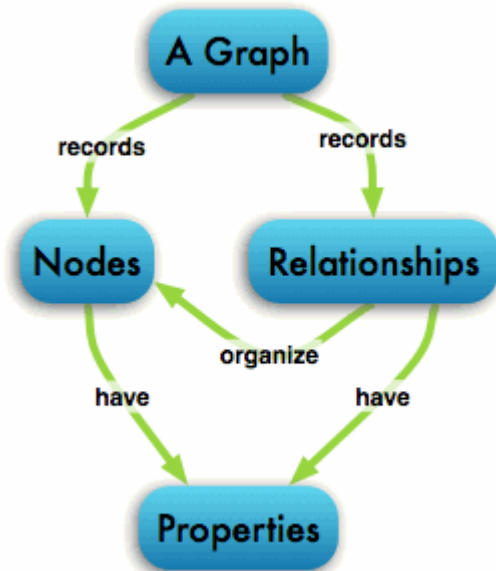
# Project Details



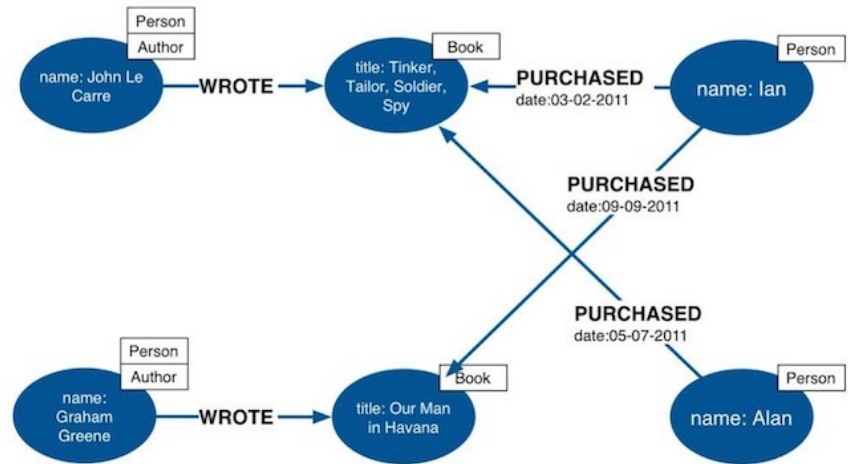
# RRN Aggregation and Storage



# The Graph Database

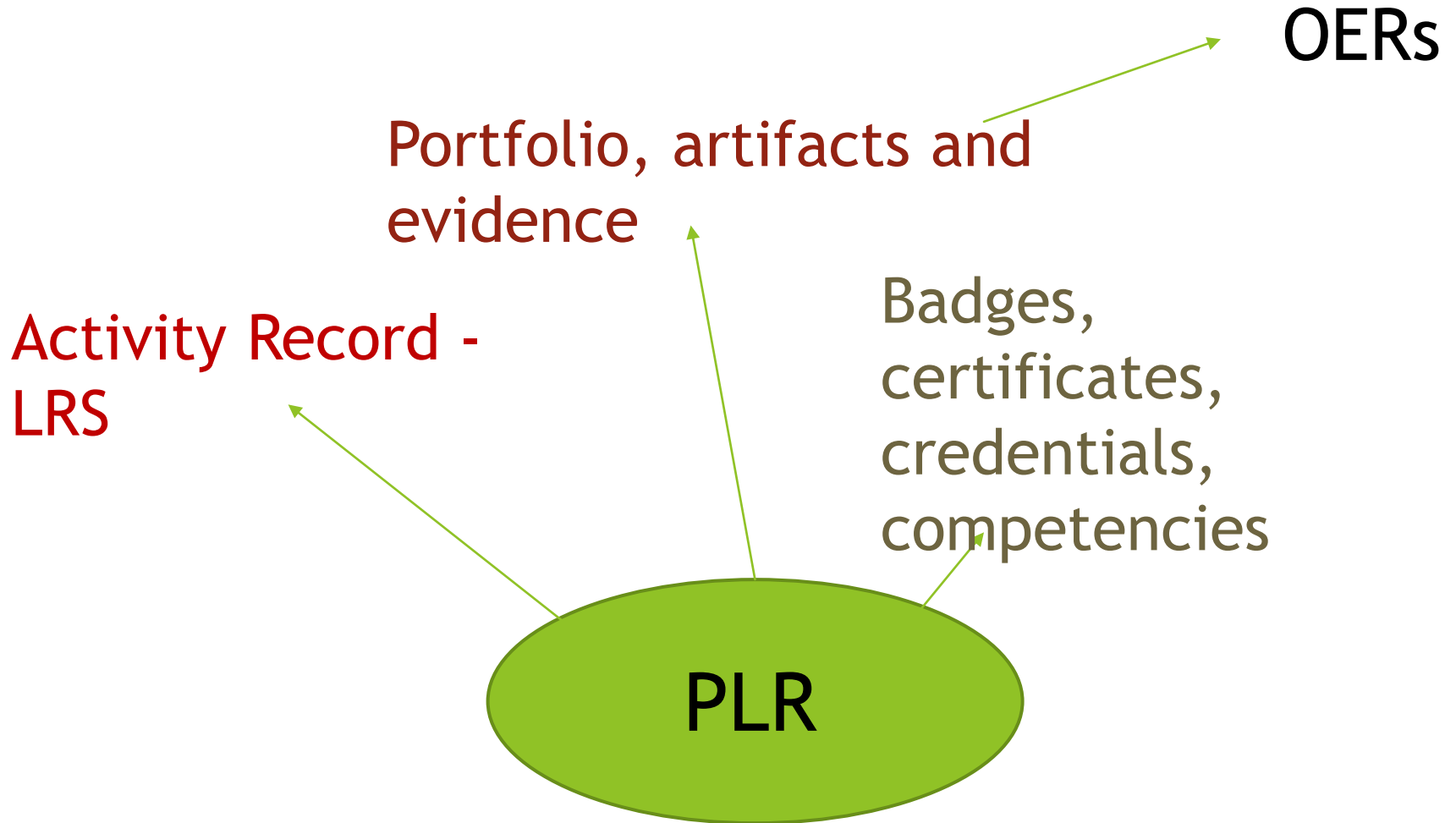


## Labeled Property Graph Data Model



<http://neo4j.com/developer/graph-database/>

# Personal Learning Record



# Why is this Difficult?

- ▶ It's not one big thing...
- ▶ ... but a set of many small things
- ▶ Tasks that are simple in an enterprise system...
  - ▶ Like data storage
  - ▶ Like content distribution
  - ▶ Like authentication
  - ▶ Like analytics
- ... become that much more difficult

# Website - LPSS.me

## Browse resources [\[ help \]](#)

1 2 3 ... 267 > >>

☒ Courses ☒ Event ☒ Feed Entry ☒ Tweets ☒ Website

Resource text		Competencies	Created
<b>Url</b> <a href="https://www.coursera.org/course/venture">https://www.coursera.org/course/venture</a> <b>Source</b> Coursera	<b>Launching New Ventures / Lancer une Nouvelle Entreprise</b> Develop your promising idea into a successful business concept proposal, and launch it! Gain practical experience in the key steps of the venture creation process, including marketing and fundraising. Sharpen your entrepreneurial... <a href="#">[ Raw data ]</a>		April 02, 2015 08:48
<b>Url</b> <a href="https://www.udacity.com/course/ud858?utm_medium...">https://www.udacity.com/course/ud858?utm_medium...</a> <b>Source</b> Udacity	<b>Developing Scalable Apps in Python</b> with Google App Engine <a href="#">[ Raw data ]</a>	<a href="#">Develops software and scripts in a variety of environments and languages</a> <a href="#">Works with LANs and WANs</a> <a href="#">Applies different software development methodologies</a> <a href="#">Works within the different software development lifecycle stages</a> <a href="#">Demonstrates an understanding of engineering economics</a>	April 02, 2015 08:01

# External Services

**LPSS**

Resources

Competencies

Learning record

About

Help

## Settings [\[ help \]](#)

My user name: **stephen@downes.ca**

### Change password:

Current password:

New password:

New password again:


### Connect with other users


Connect using [email](#).


### Personal learning record settings: [\[ help \]](#)


Allow automatic recording of user actions: ☒


Choose the type of account you would like to add


☐  DropBox

☐  Facebook

☐  Google+

☐  OwnCloud

☐  Twitter

☐  xAPI

## Browse competencies [\[ help \]](#)

Search

1 2 3 .. 7 &gt; &gt;&gt;

[+ Competency](#)[Import](#)☒ Competency hierarchies☐ Only my competencies☒ Competencies

Acknowledges the practical limits of a system for problem solving <sup>[1]</sup> ✕

☐ Add to my profile

resources: 69

Analyze a situation in a systematic manner. <sup>[2]</sup> ✕

☐ Add to my profile

resources: 19

Applies different software development methodologies <sup>[1]</sup> ✕

☐ Add to my profile

resources: 59

Be familiar with adult learning techniques such as mentoring, coaching, and the sharing of expertise and best practices. <sup>[2]</sup> ✕

☐ Add to my profile

resources: 72

Communicate to clients those activities that can and cannot be done. <sup>[2]</sup> ✕

☐ Add to my profile

resources: 15

Acts with fairness, courtesy and good faith towards clients, colleagues and others <sup>[1]</sup> ✕

☐ Add to my profile

Analyze issues to separate the cause from the symptoms. <sup>[2]</sup> ✕

☐ Add to my profile

resources: 16

Applies the correct statistical methods to analyze and investigate data <sup>[1]</sup> ✕

☐ Add to my profile

Build mutual trust by being reliable, consistent and credible. <sup>[2]</sup> ✕

Communication <sup>[2]</sup> ✕


☐ Add to my profile

resources: 10

# LPSS: Some Case Studies



# MOOC – CCK08



**LTC**  
Learning Technology Centre

Connectivism 2008

Welcome to the Connectivism and Connective Knowledge Online Course support wiki.


Conference tags: CCK08

This page is also available in: [Spanish](#), [Portuguese](#), [Italian](#), [Hungarian](#), [Chinese & \(Simplified Character Version\)](#), and [German](#). See also [this short post](#) & [suffing in China easier](#)!

This course also has a Facebook group at [CCK08 @](#)

**Contents [how]**

- 1 Please enter your email address here if you'd like to be involved (either for free participation or to enroll for credit).
- 2 Course link is available here
- 3 Course Details
- 4 Weekly Activities
- 5 Learner Assignments and Evaluation
- 6 Course Links
- 7 Pre-week 1
- 8 Week 1: What is Connectivism? (September 8-14)
- 9 Week 2: Rethinking epistemology: Connective knowledge (September 15-21)
- 10 Week 3: Properties of Networks (September 22-28)
- 11 Week 4: History of networked learning (September 29-October 5)
- 12 Week 5: Connectives and Collectives: Distinctions between networks and groups (October 6-12)
- 13 Week 6: Complexity, Chaos and Randomness (October 13-19)
- 14 Week 7: Instructional design and connectivism (October 20-26)
- 15 Week 8: Power, control, validity, and authority in distributed environments (October 27-November 2)
- 16 Week 9: What becomes of the teacher? New roles for educators (November 3-9)
- 17 Week 10: Openness: social change and future directions (November 10-16)
- 18 Week 11: Systemic change: How do institutions respond? (November 17-23)
- 19 Week 12: The Future of Connectivism and Directions in Research (November 24-30)
- 20 Short Paper 1: Your position on Connectivism



Participants list

Links

Map of participant

Facebook group

Profiles

Class homepage

RSS feed

Technical search CCK08


lists

Decentralized introductions

stratified introductions

stratified discussions

(does not work for me)

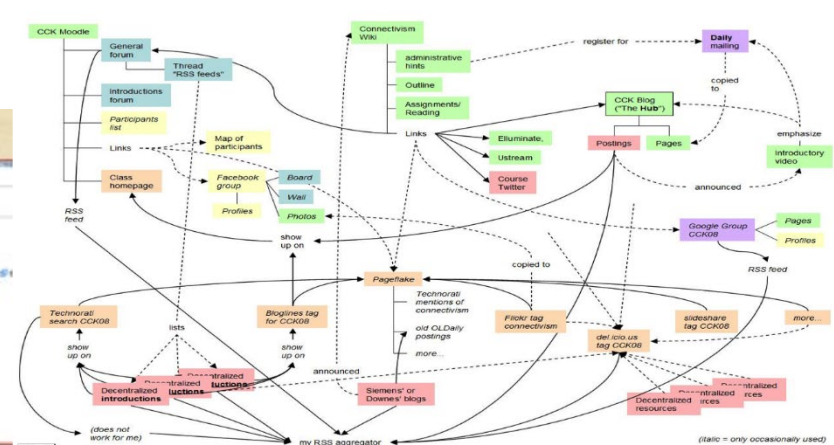


# 2008: CCK08

## Stephen Downes, George Siemens

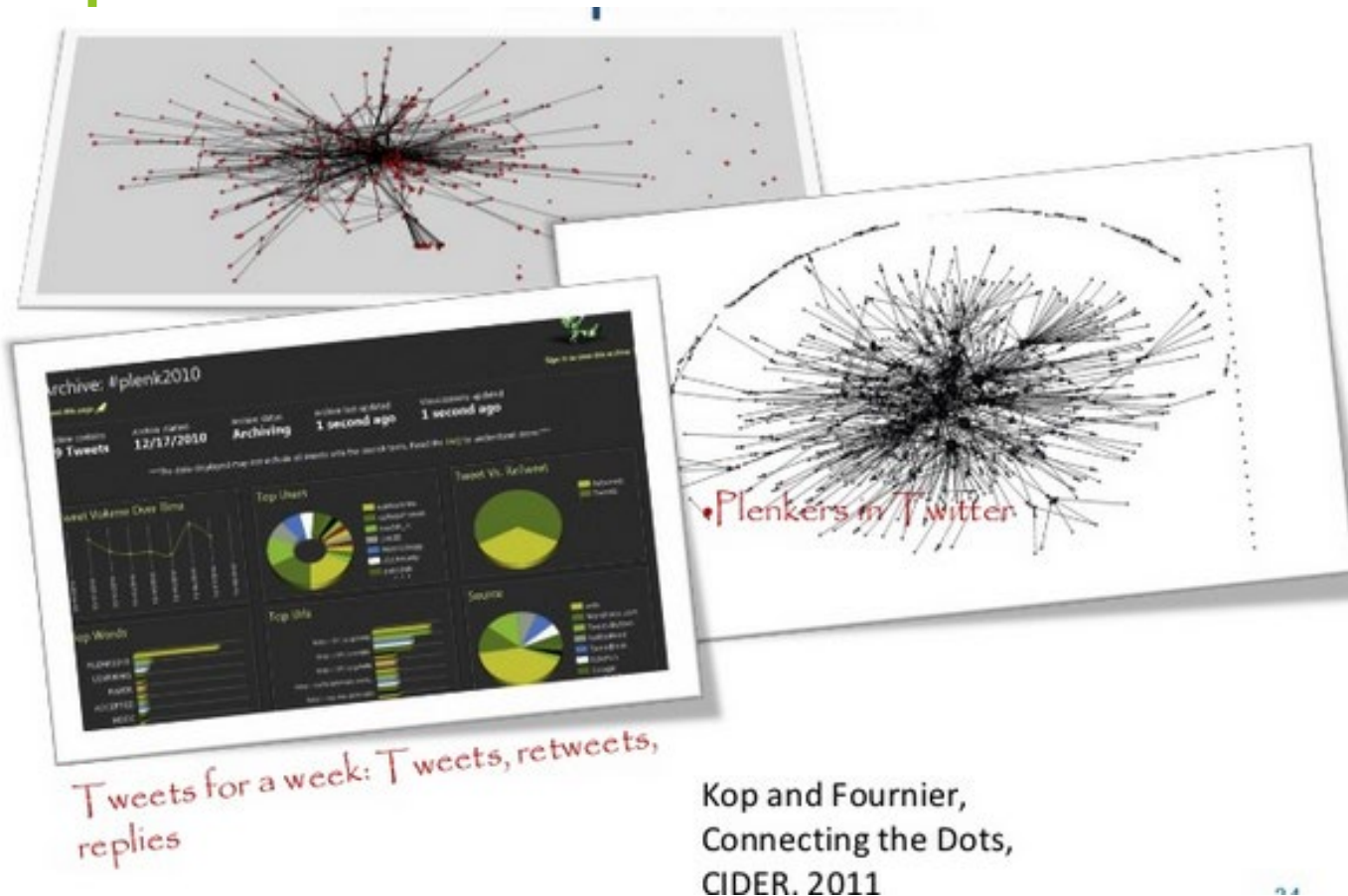
### The First Massive Open Online Course (MOOC)

[http://ltc.umanitoba.ca/wiki/Connectivism\\_2008](http://ltc.umanitoba.ca/wiki/Connectivism_2008)



<https://sites.google.com/site/themoocguide/3-cck08---the-distributed-course>

# Plearn - Importance of the Graph



<http://www.slideshare.net/Downes/after-moodle>

<http://www.slideshare.net/Ritakop/kopfourniercanadianinstitutedistanceeducationresearchple>

# OIF - MOOC-REL

## REL 2014 - Pour une éducation libre

[ACCUEIL](#)[VOTRE COMPTE ▾](#)[COMPTES RENDUS ▾](#)[PARTICIPER ▾](#)[SYNDICATION RSS ▾](#)[ARCHIVES ▾](#)

Vous n'êtes pas connecté(e). [\[Connexion\]](#) - [\[Inscription\]](#)

Réutiliser, retravailler,  
recombinaire, redistribuer



INTRODUCTION ▾

1. DU CLOM  
CONNECTIVISTE ET  
FONCTIONNEMENT DE CE  
COURS ▾

### Réutiliser, Retravailler, Recombiner, Redistribuer – 4R des REL pour une Éducation libre

Bienvenue à votre Cours en Ligne Ouvert et Massif (CLOM) de l'Organisation internationale de la Francophonie portant sur les ressources éducatives libres (REL).

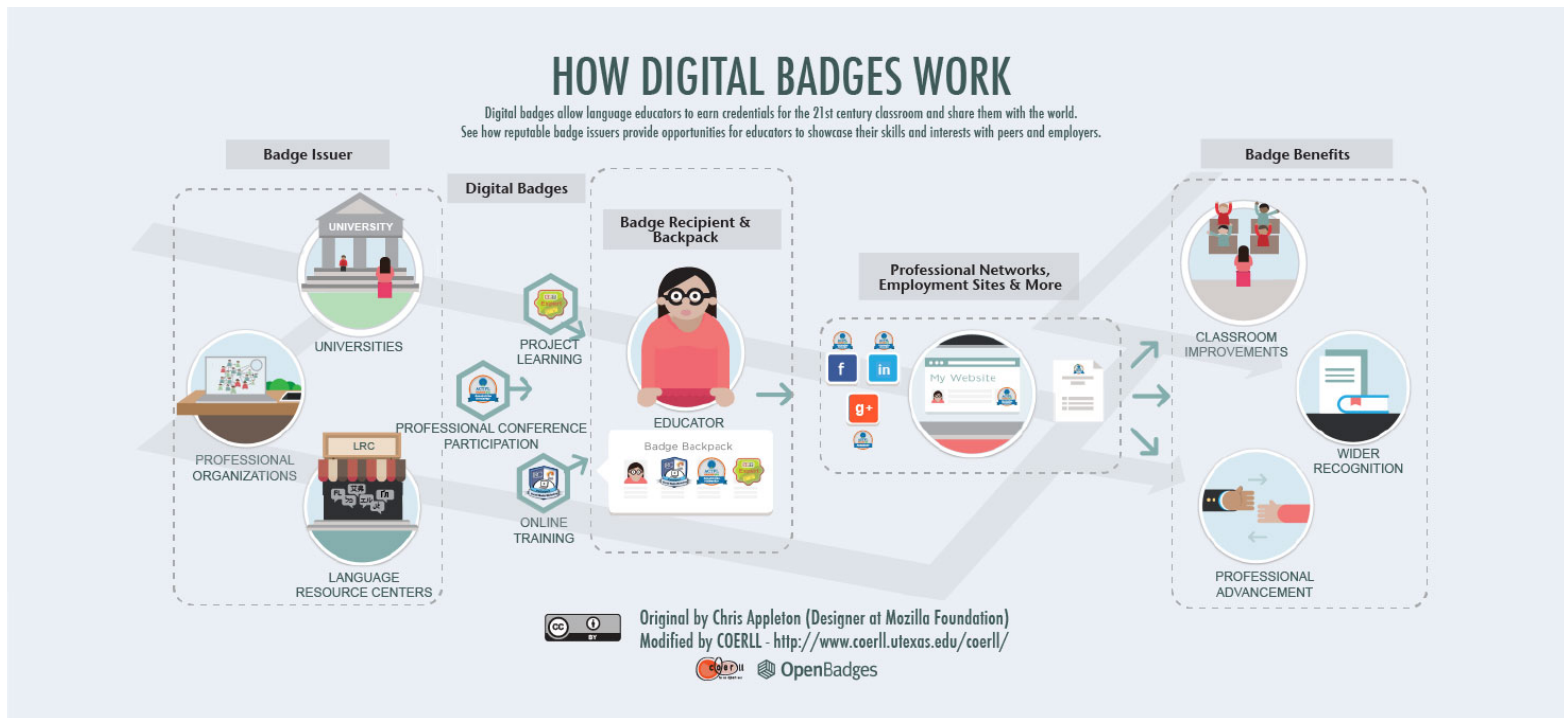
Le cours débute le 3 mars 2014 et dure neuf semaines consécutives. Si vous n'êtes pas déjà inscrit(e), faites-le tout de suite pour recevoir le Bulletin de nouvelles quotidiennes et bénéficier du droit de commentaires/discussion dans le site.

### Introduction au CLOM REL 2014

Vous trouverez ci-dessous une courte vidéo qui explique le contexte du présent cours. Nous vous

<http://rel2014.mooc.ca/>

# PCO Badges for Learning



<http://www.downes.ca/post/63738>

# ONGARDE



<http://www.journal.forces.gc.ca/vol14/no2/page70-eng.asp>

# ALECSO - Capacity Building



<http://www.downes.ca/presentation/337>

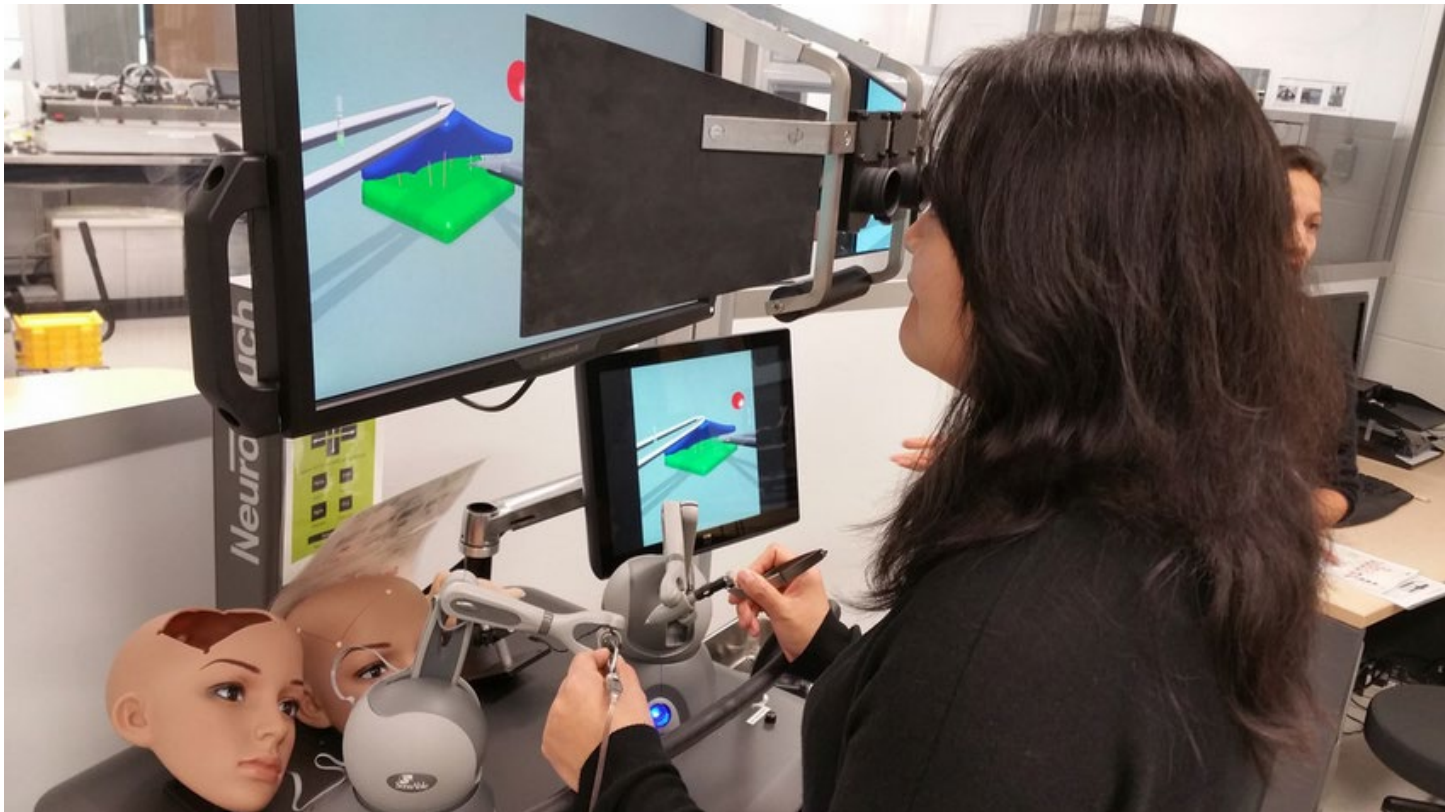
# MINT - Mobile INteractive

## Training



<http://www.downes.ca/post/59876>

# Collecting xAPI from Med Sims



[https://www.flickr.com/photos/stephen\\_downes/15710336207/](https://www.flickr.com/photos/stephen_downes/15710336207/)

<http://www.nrc-cnrc.gc.ca/eng/rd/medical/>

# Concierge OMS

 Government of Canada / Gouvernement du Canada

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Home → Your guide to innovation

## Your guide to innovation

Helping Canadian enterprises find and access programs and services that support business innovation.



How can we help you?

Go

Find a program that meets your needs

Learn more

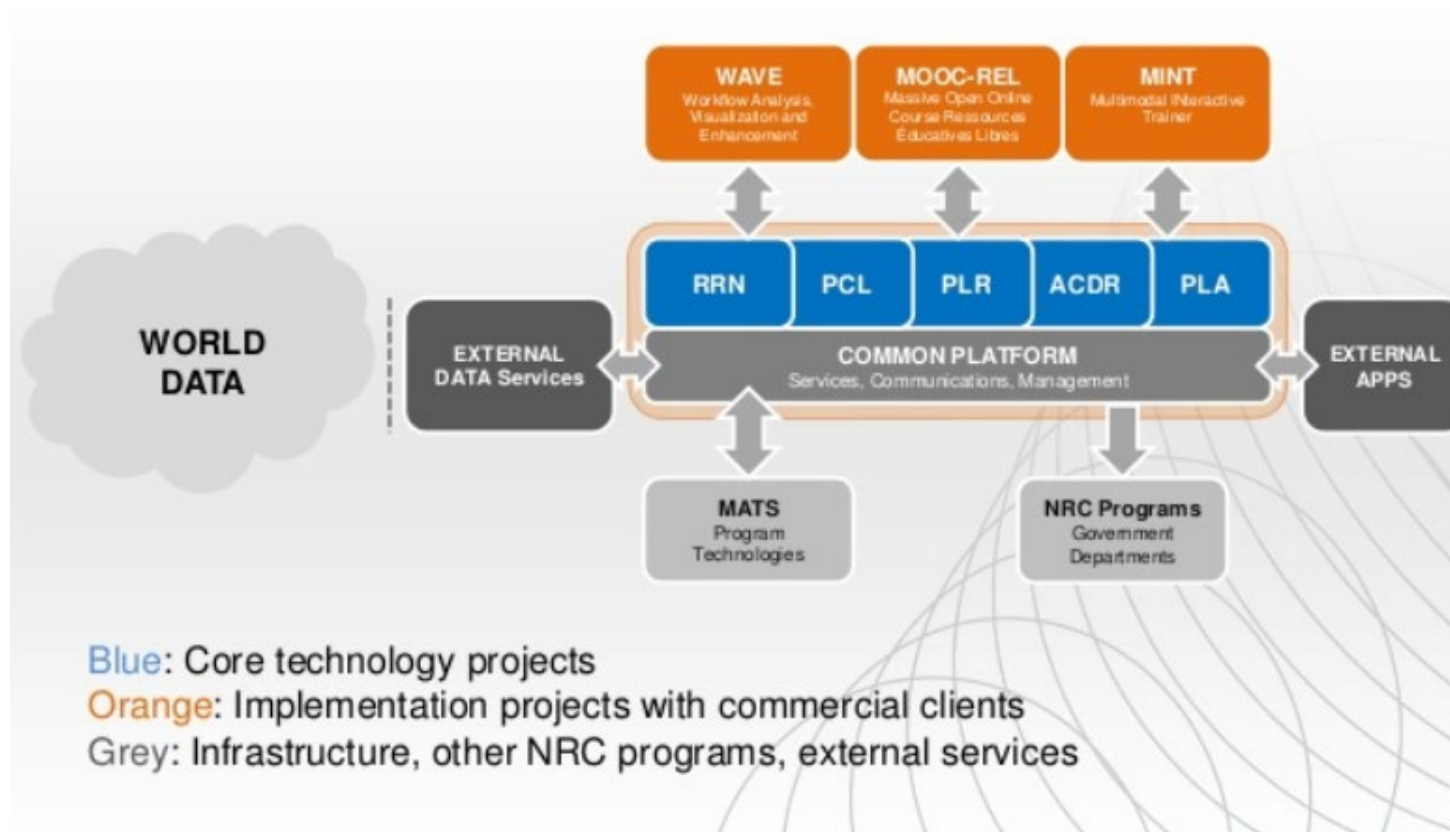


Create an account to get the benefits to support you & your business!



<https://concierge.portal.gc.ca/>

# How to Engage



<http://www.nrc-cnrc.gc.ca/eng/solutions/collaborative/lpss.html>

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- ▶ Stephen.Downes@nrc-cnrc.gc.ca
- ▶ <http://www.nrc-cnrc.gc.ca>