

# A Personal Learning Framework

**Stephen Downes**

**February 8, 2014**

**Learning and Performance Support Systems**



National Research  
Council Canada

Conseil national  
de recherches Canada

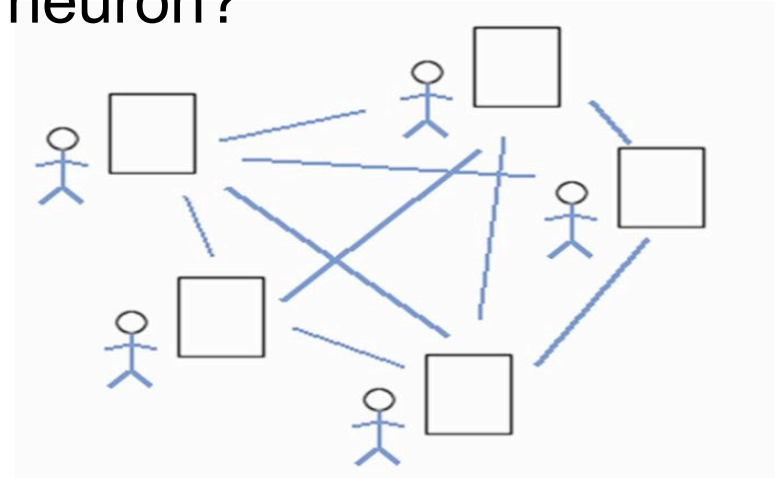
**Canada** 

Organizations aren't thinking about the 'networked individual' – the networking choices and patterns of individual Internet users. They're still focused on their own organizational information systems and traditional institutional networks.

*William H. Dutton*

[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1767870](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1767870)

- We are still in a world of mass, of masses of people, votes, ideas
- These are the properties of the individual, applied to the whole
- Is the power of the brain in the neuron?  
Really?



<http://www.downes.ca/post/43456>

## Connectivism

“At its heart, connectivism is the thesis that knowledge is distributed across a network of connections, and therefore that learning consists of the ability to construct and traverse those networks.”

*What Connectivism Is*

<http://halfanhour.blogspot.com/2007/02/what-connectivism-is.html>

## Typical Workplace Learning:

- Demand driven
- Employer driven
- Content driven

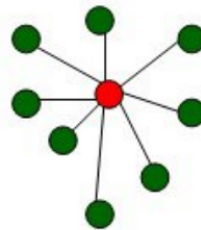
It's no coincidence that the dominant workplace e-learning technology is based on military training manuals

## The Evolving Organization

Competition Collaboration Cooperation



~19th C



+/- 20th C



21st C

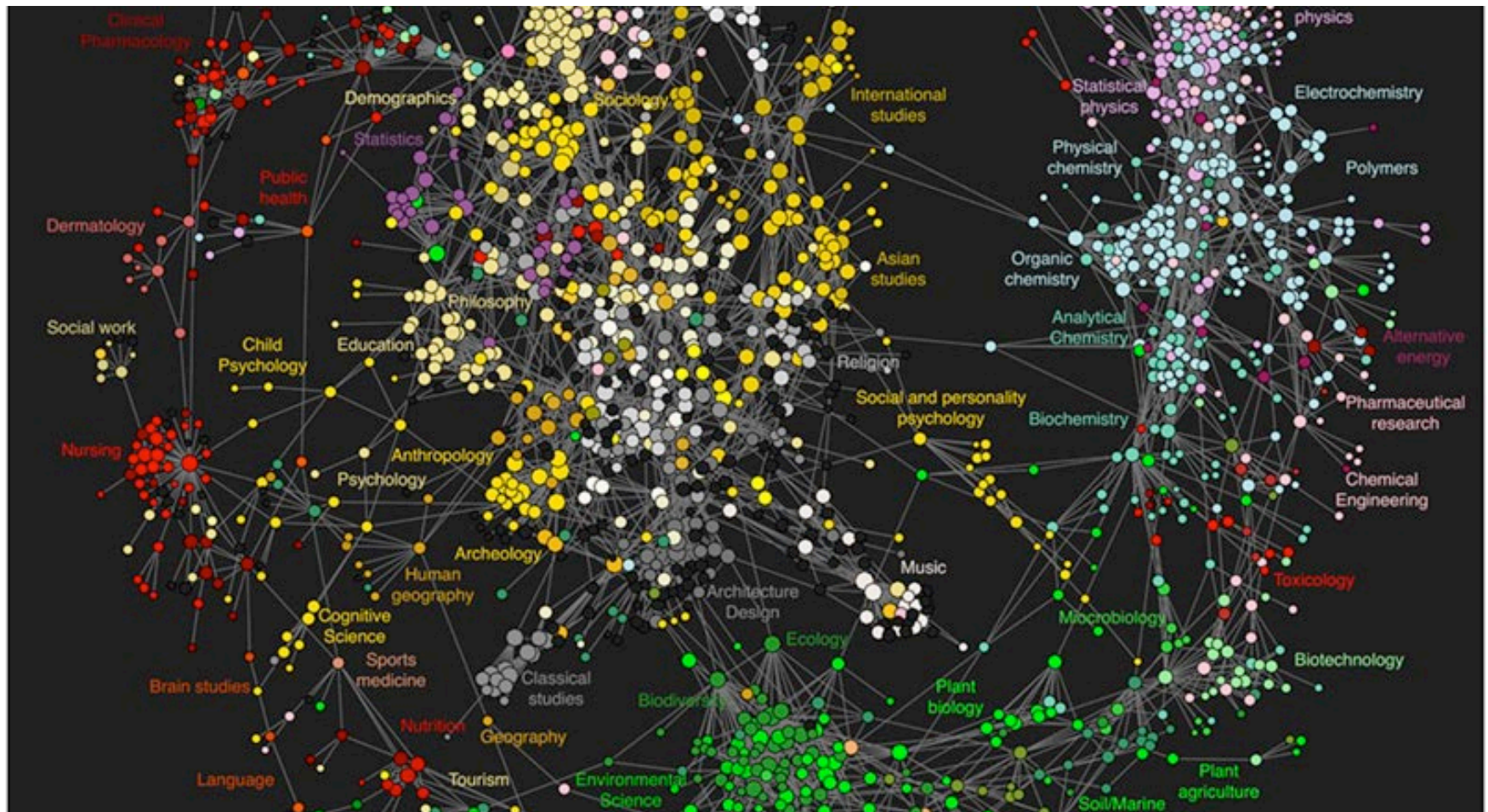
Adapted from: [http://www.slideshare.net/jarche/working-smarter-hr-exec-council?from=ss\\_embed](http://www.slideshare.net/jarche/working-smarter-hr-exec-council?from=ss_embed)

# Community = Interactions

- Not 'spreading the word'
- Not 'amplification'
- But rather, the creation of our own society, together
  - emergent from the free actions of each of us
  - not based on the ideas of one (or a small number) of individuals



# New Roles for Research

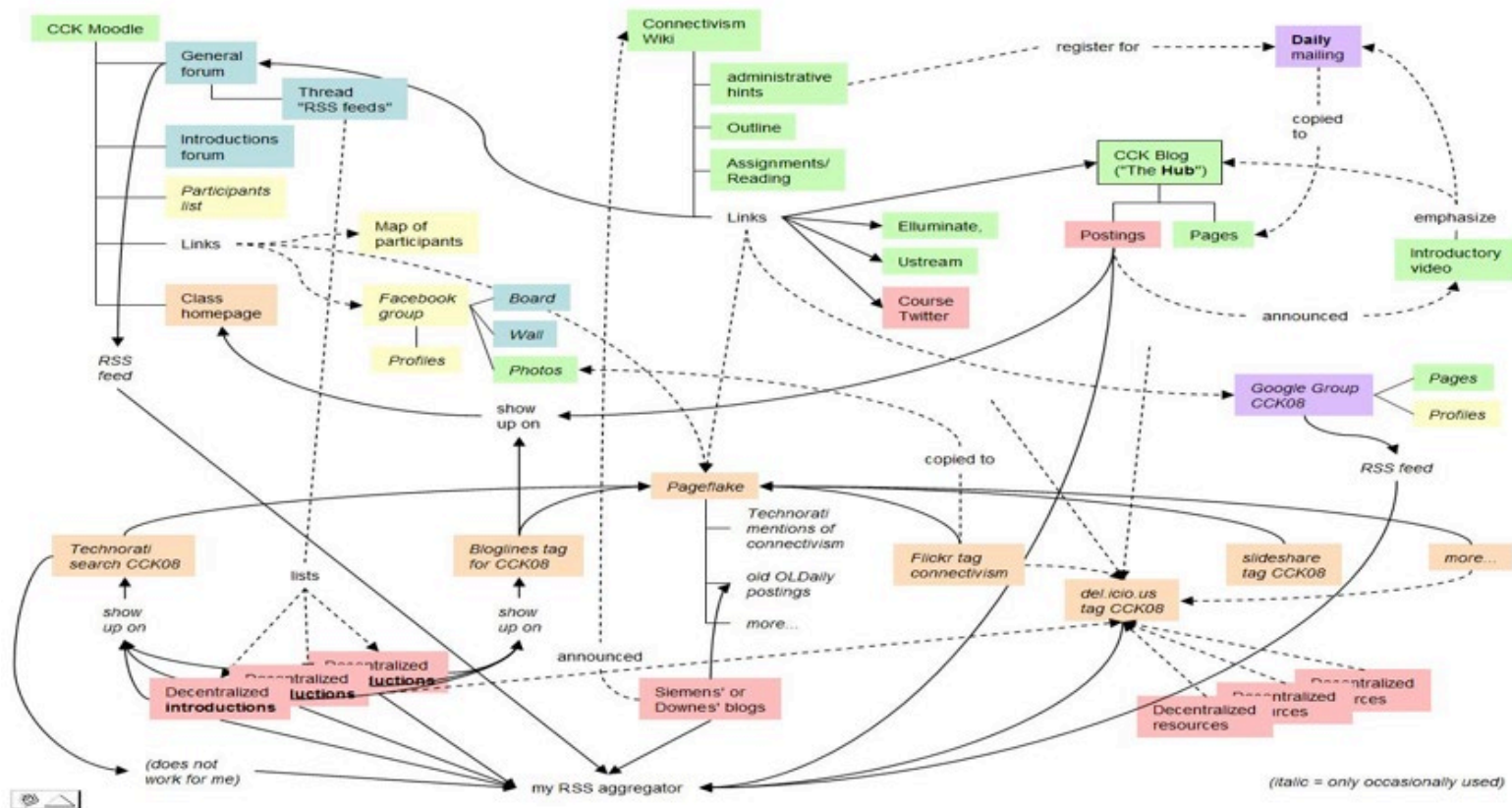




# New Models for Schools



# A Map of the Community



Connectivism: A Theory of Personal Learning

Stephen Downes, December 3, 2008, Educational Development Centre, Ottawa

<http://www.downes.ca/presentation/208>

# The MOOC Model

- MOOC: Massive Open Online Course
- There is no central core feature – no core content, group, etc
- Course design is a network, or a map, or a community
- Resources are distributed, and aggregated
- Participants are encouraged to create their own resources, communities, groups

# PLENK2010

Personal Learning Environments  
Networks and Knowledge 2010



[home](#) [discussion](#) [wiki](#) [the daily](#) [blog](#) [live sessions](#) [recordings](#) [about](#)

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## Schedule

WEEK OF...  
**12TH SEPTEMBER 2010**  
[A TOUR OF PLES AND PLNs](#)

**19TH SEPTEMBER 2010**  
[CONTRASTING PLES WITH LMSS](#)

**26TH SEPTEMBER 2010**  
[THE NEXT/EXTENDED WEB](#)

**3RD OCTOBER 2010**  
[PLE/PLN AND LEARNING THEORIES](#)

**10TH OCTOBER 2010**  
[EVALUATING LEARNING IN PLE/Ns](#)

**17TH OCTOBER 2010**  
[USING PLES SUCCESSFULLY](#)

**24TH OCTOBER 2010**

You are NOT LOGGED IN. [[LOGIN](#)] [[REGISTER](#)]

## Welcome to the Course



If you would like to register for PLENK2010 there's still time to register.  
[Click here to Register](#)

<http://connect.downes.ca/>

# PLENK Analytics



Rita Kop

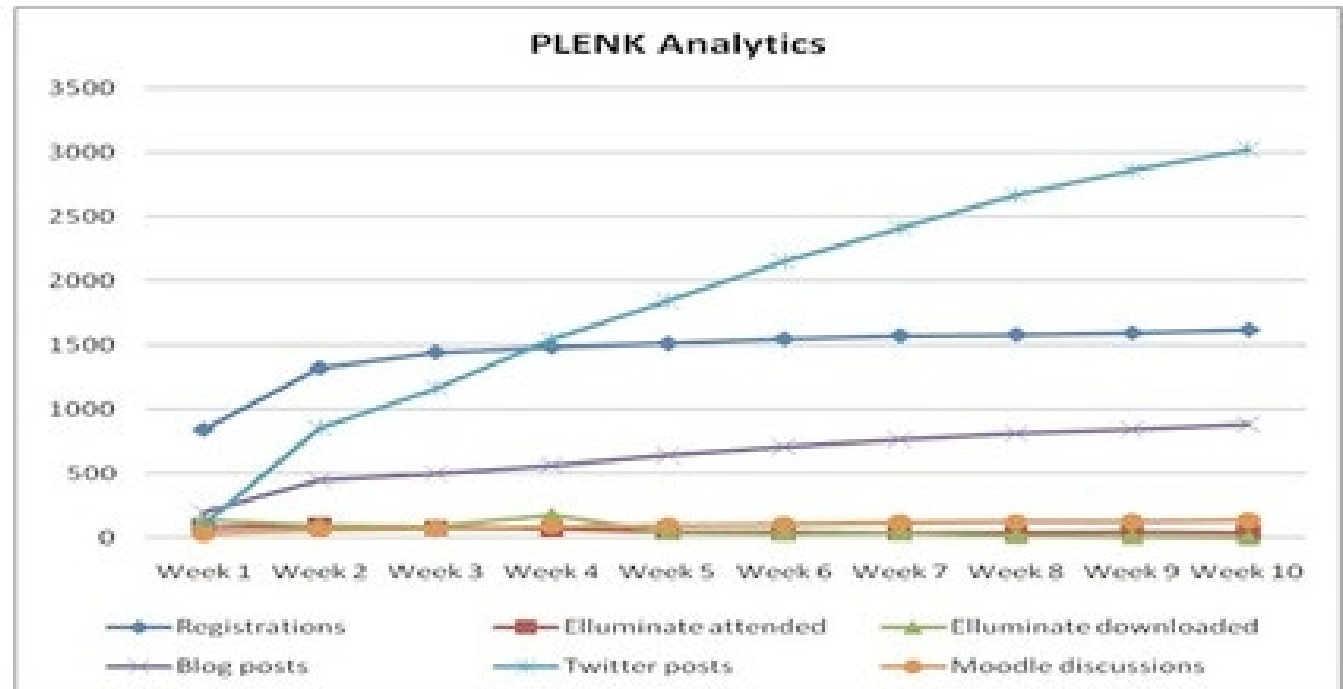


Chart 2. PLENK participation rates.


Supporting ongoing MOOC participation

<http://www.irrodl.org/index.php/irrodl/article/view/882>

# Critical Literacies

A frame for understanding new media  
Morris, Derrida and a little Lao Tzu

Syntax	Cognition
Semantics	Context
Pragmatics	Change



Understanding how we use artifacts to *communicate* in online and other learning networks

<http://www.downes.ca/presentation/232>



“Students, as they are increasingly posed with problems relating to themselves in the world and with the world, will feel increasingly challenged and obliged to respond to that challenge... Their response to the challenge evokes new challenges, followed by new understandings; and gradually the students come to regard themselves as committed.”

*Paulo Freire*

<http://www.marxists.org/subject/education/freire/pedagogy/ch02.htm>

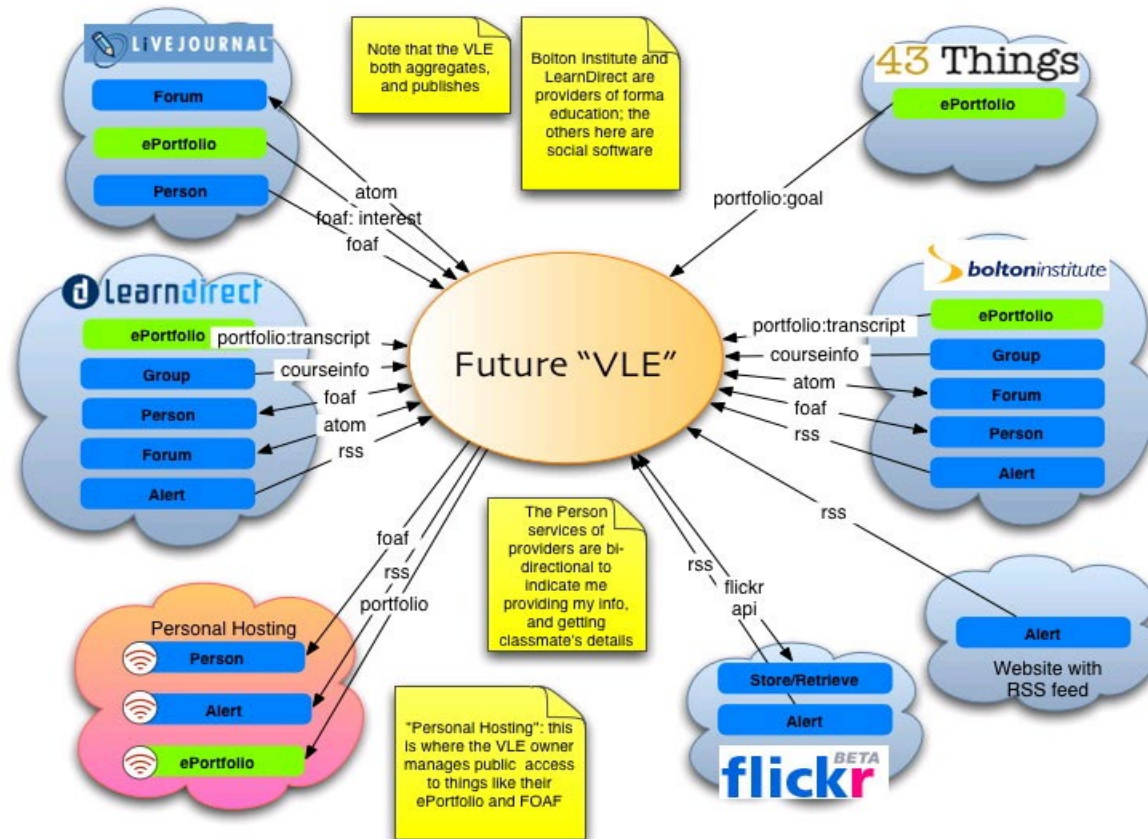
# Personal Knowledge

- Is not 'constructed'
- You do not 'make meaning' for yourself
- It is a matter of organic growth



This is important because it means that developing personal knowledge is more like *exercising* than like inputting, absorbing or remembering

# The Main Idea



The web of the future isn't about visiting sites, it's about connecting resources.

We're trying to understand society by collecting individuals  
But a sand castle isn't just a pile of sand



Image: <http://pixdaus.com/single.php?id=25529>  
<http://www.downes.ca/presentation/257>



Knowledge is distributed across a network of connections  
Learning is the ability to traverse and grow those networks



<http://www.downes.ca/post/38653>

There is no curriculum, no body of knowledge - McGuffin  
The product of learning is the learner



Fernando  
Flores  
Emotional  
Fortitude

## 21<sup>st</sup> century skills

Image: [http://www.masternewmedia.org/news/2008/06/01/making\\_sense\\_of\\_new\\_technologies.htm](http://www.masternewmedia.org/news/2008/06/01/making_sense_of_new_technologies.htm)



It's not that there's nothing to learn  
But that it's complex, and needs to be *navigated*  
Not memorized

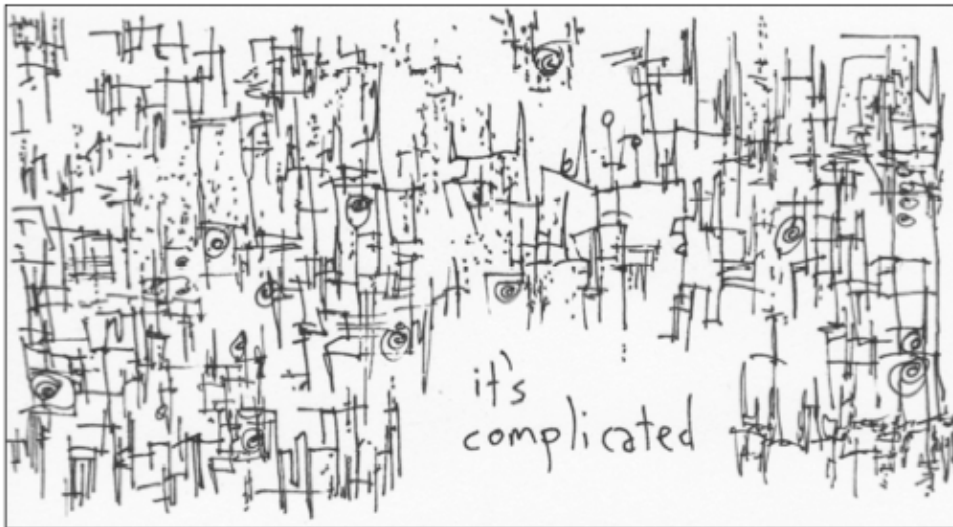


Image: <http://www.gapingvoid.com/complicated128.jpg>

<http://www.downes.ca/post/48669>

A tool for learning networks

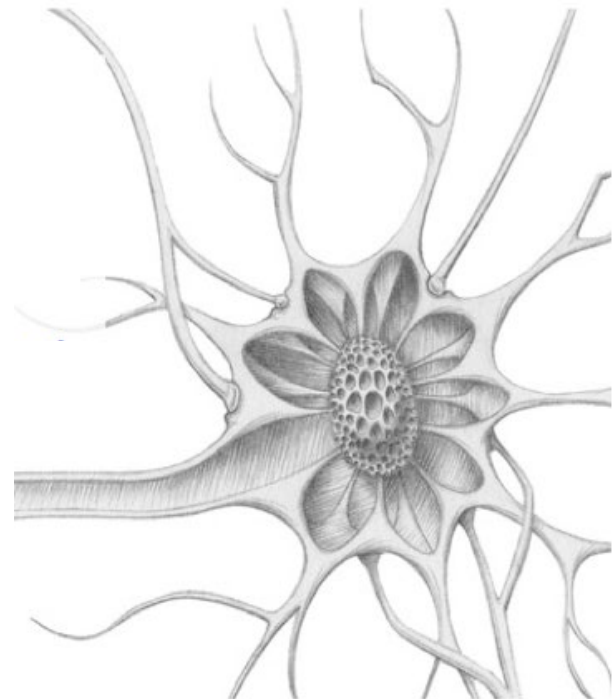
It functions as a *node*

Not as part of a *mass*



<http://grsshopper.downes.ca/>

- We function as nodes in the network
- Aggregate, remix, repurpose, feed forward
- Craig Newmark: listen to people, repeat what they say, and then get out of the way.



<http://ple.elg.ca/course/?p=18>

# Two kinds of knowledge

- personal knowledge
- social, or public knowledge

## Networks in general

### A common set of principles

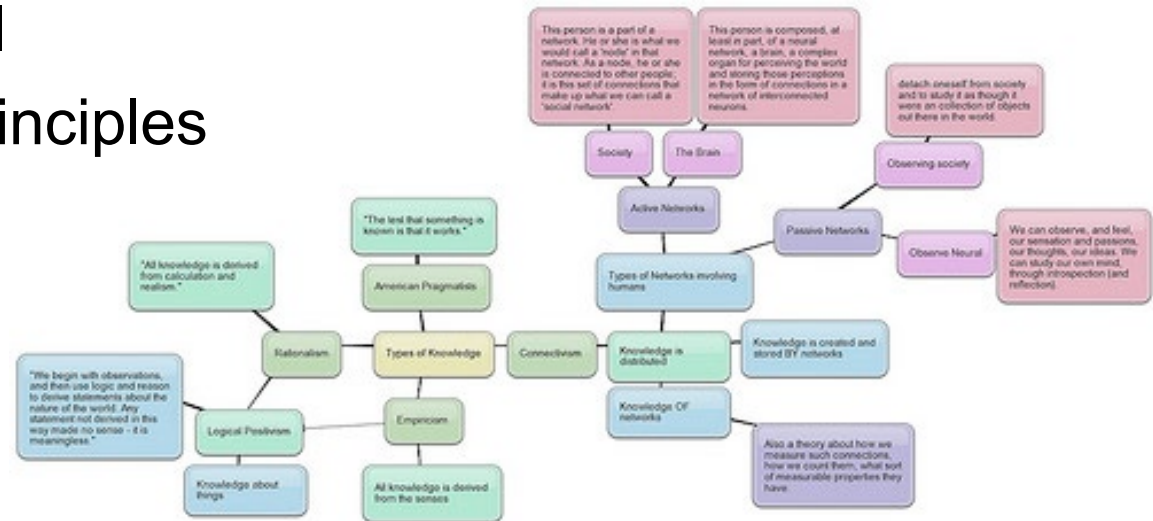
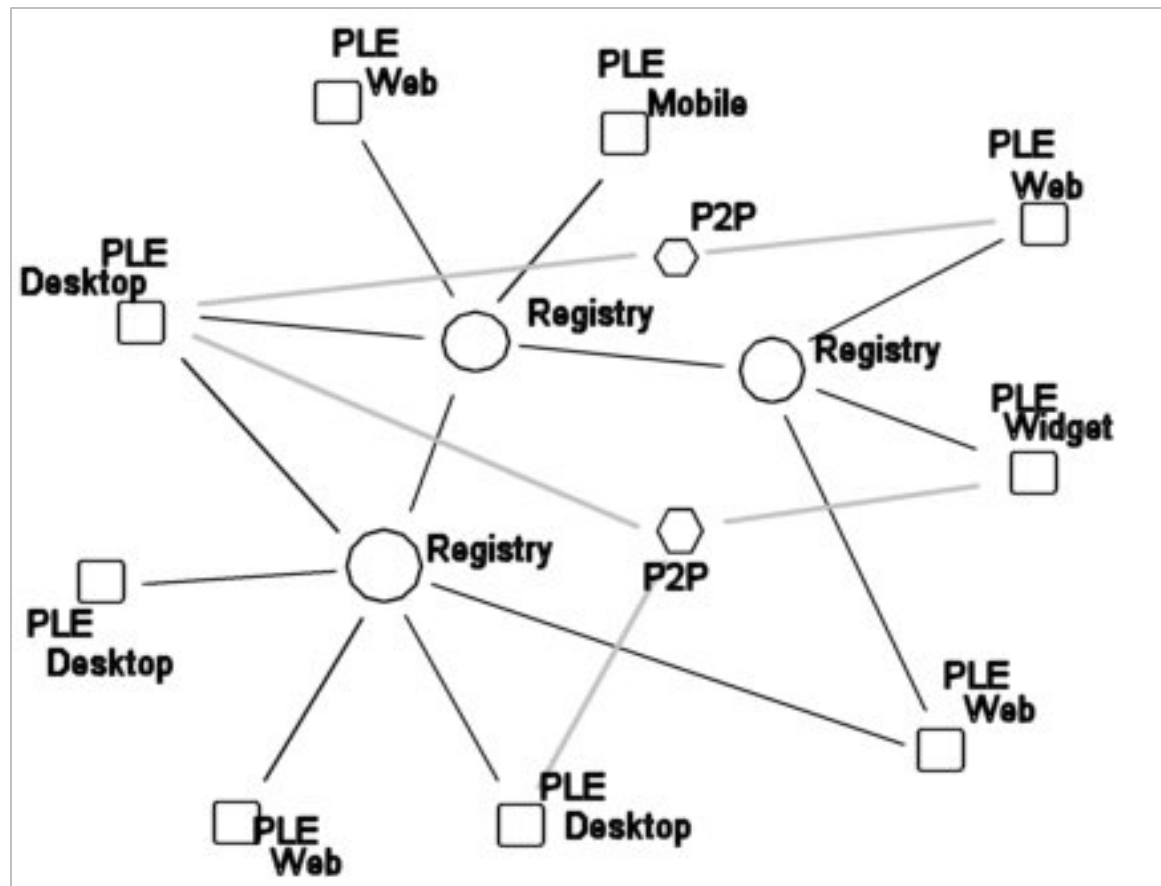
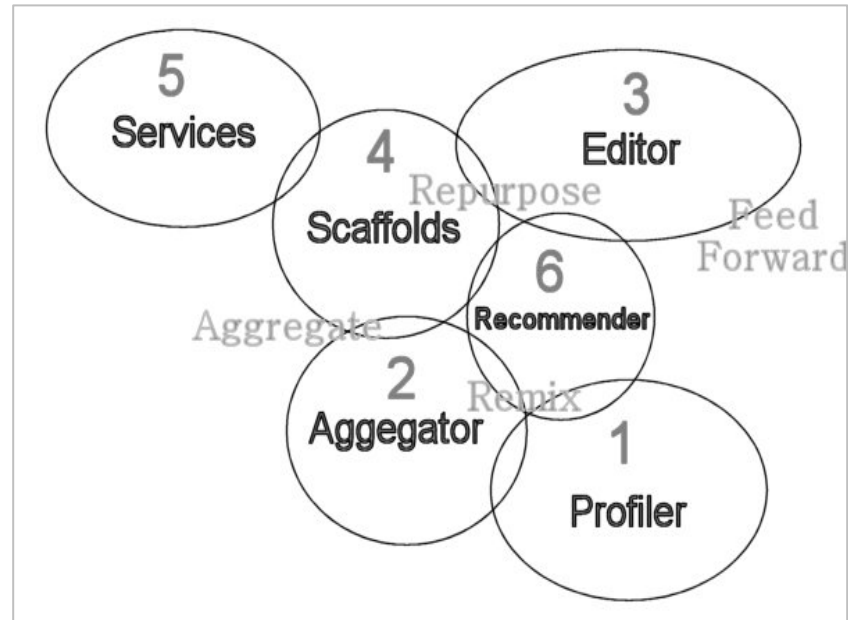
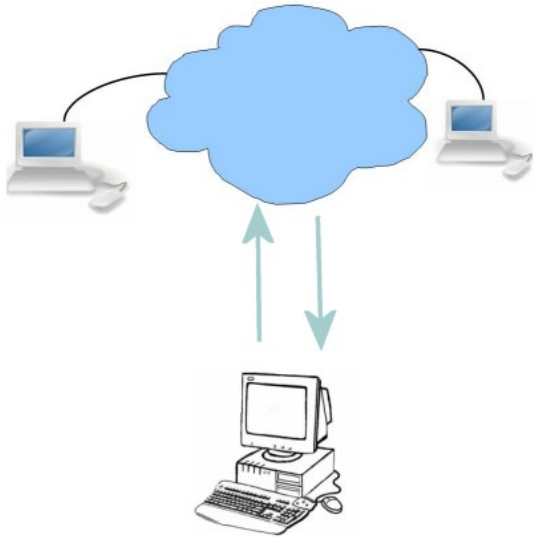


Image: <http://techticker.net/2008/09/16/types-of-knowledge/>  
<http://www.downes.ca/post/33034>

# The Design of a PLE



# Plearn

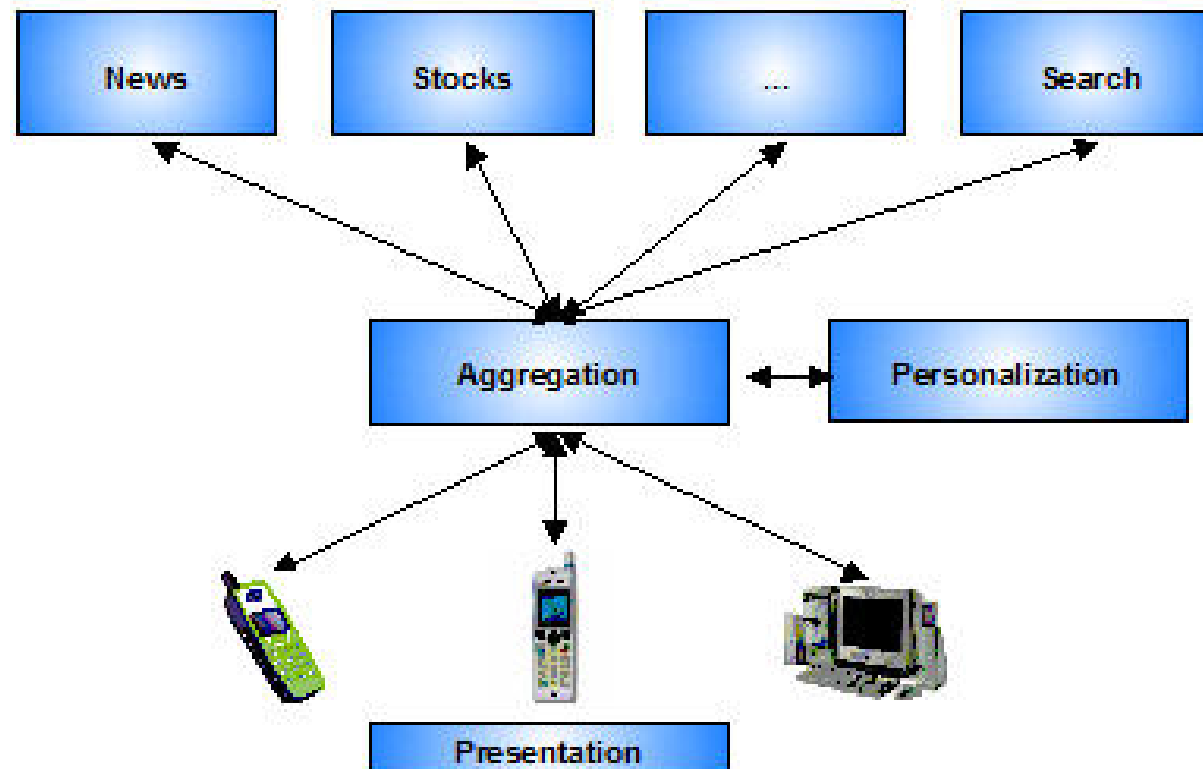


personal  
learning environment  
plearn / **pl3xn** /



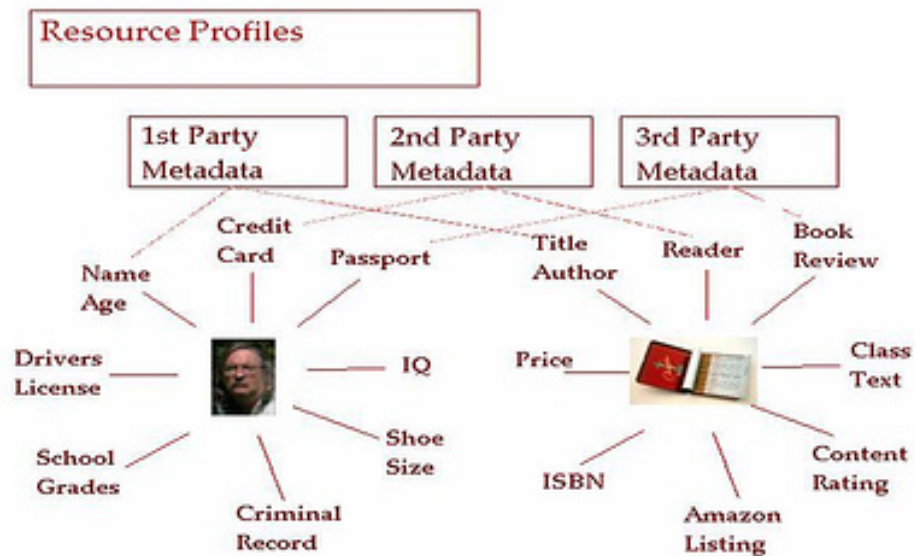
# Aggregation

## Aggregation

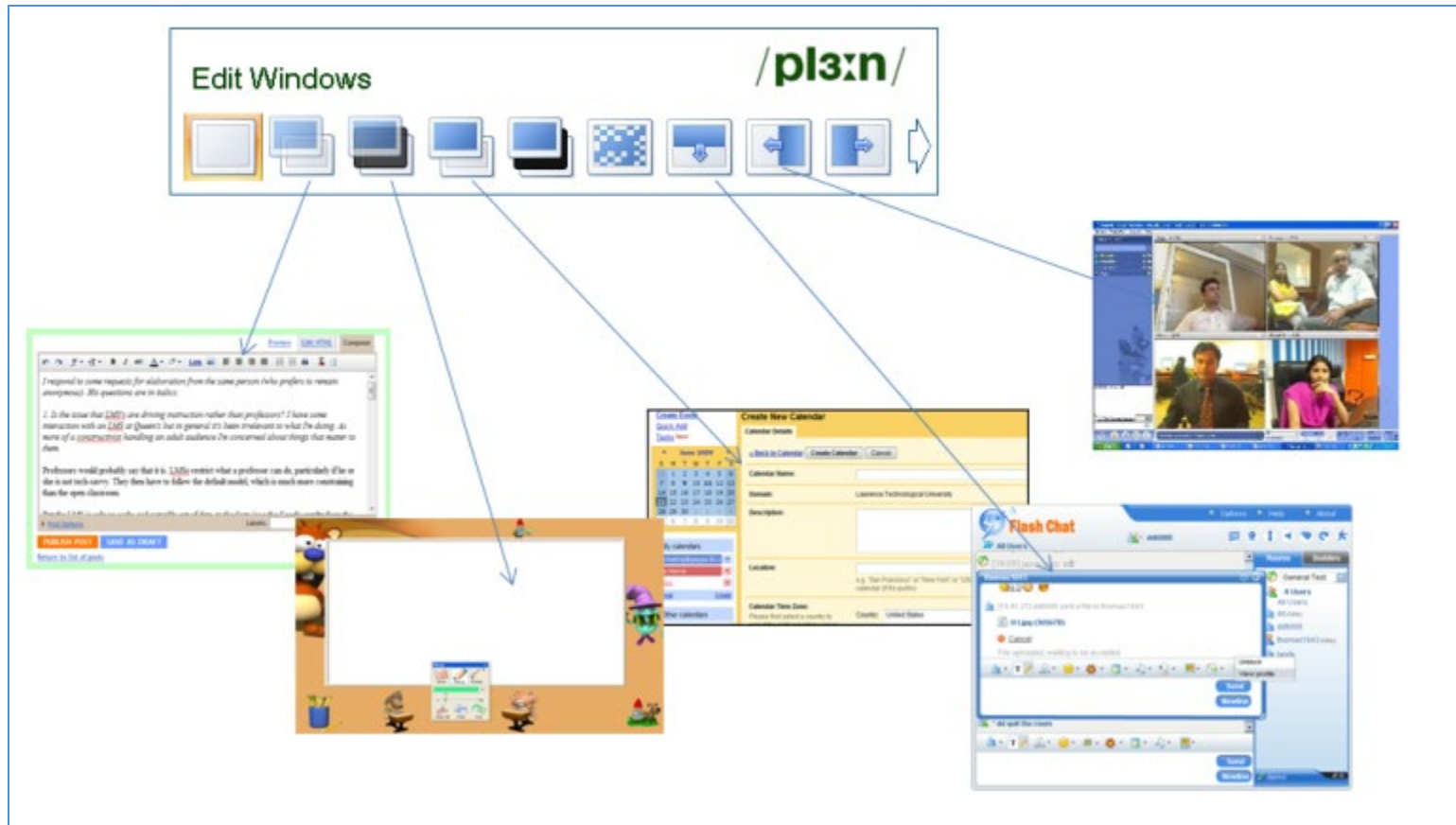


# Resource Profiles

## Resource Profiles



# Scaffolds and Third Party Services



# Learning and Performance Support Systems

Single point of access to all skills development and training needs



- It's personal and you carry it with you
- It's a network – we don't put everything in one package, but develop an infrastructure that links relevant resources
- Different types of things, not just courses:
  - Access to learning resources
  - Calling cards and communication tools
  - Credentials, permits and licenses

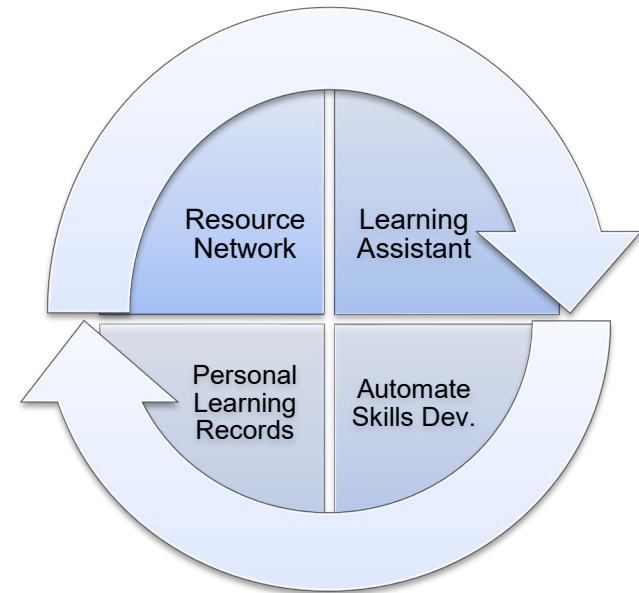
- Individual learning path
- Context-aware support
- Searchable and verifiable
- Tailored to industry needs
- Always available
- Point of need performance support





# 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

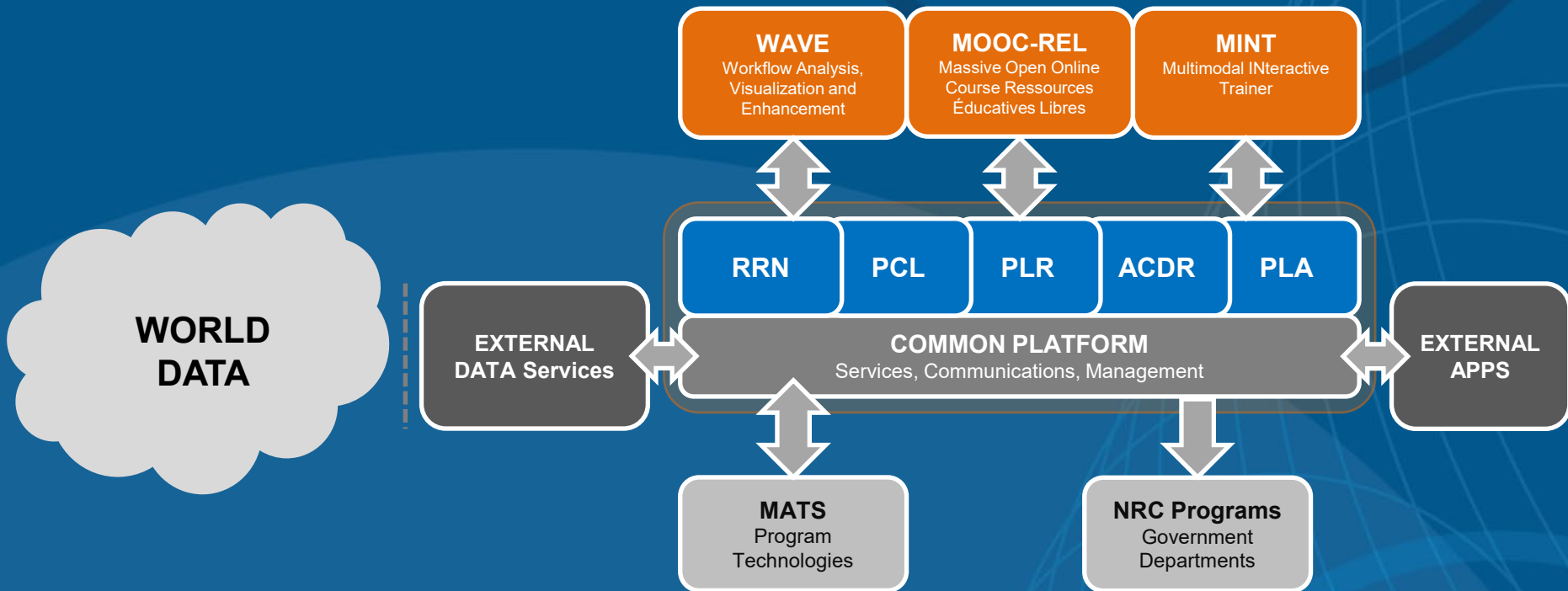


- Learning as a cloud service and deep integration with external systems

# Technical and scientific requirements

- User / Data / Knowledge / Access Management
- Workflow Management / Recommender Engines
- Analytics / Search / Profiling Tools
- Intelligent Tutoring / Adaptive Learning / EPSS
- Educational / Learning Sociology / Psychology / Technology / Policies
- Skills / Competency / Proficiency Framework
- HCI / HMI (Human Computer / Machine Interaction)
- Modeling / Simulations for learning
- Input / Output Modalities and Edge connections

# Program Design and Scope



**Blue:** Core technology projects

**Orange:** Implementation projects with commercial clients

**Grey:** Infrastructure, other NRC programs, external services

# Thank you

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