Open Software for Learning Analytics

Nancy, May 2017

Ian Dolphin, Apereo Foundation - ian.dolphin@apereo.org

What is Open Source?

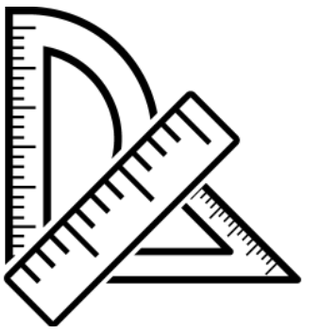
… software for which the original source code is made freely available and may be redistributed and modified …

https://opensource.org/osd-annotated

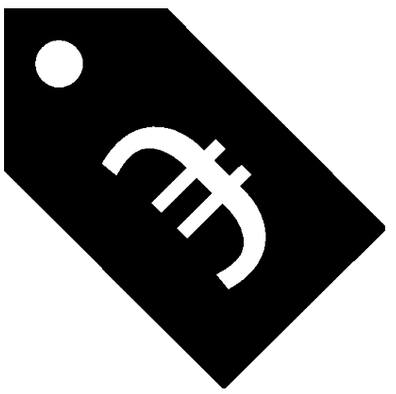
Why Open Source?

Why Open Source?

Control

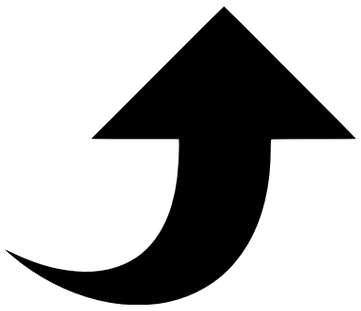


Suitability



Cost

Unpicking ‘Control’



Upgrade Paths

Support Options & Portability = Choice

Innovation & Collaboration

‘Control’

The Mathematics of Collaboration

2 + 2 + 2 = 5

Unpicking

Less than 6, but **more than** 2 …

What is Apereo?

The Apereo Foundation

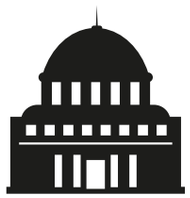
Reduce the **overhead of collaboration**

Manage collective **intellectual property**

Provide shared services that reduce friction

What is Apereo?

Membership Organization



Legal: New Jersey 501.c.3

Elected Board of Directors

Global Membership

+ Partnership ESUP-Portail in France

Mission

… to assist and facilitate educational organizations which “collaborate to foster, develop, and sustain open technologies and innovation to support learning, teaching, and research."

– The Apereo Foundation is a non-profit [501(c)(3)] registered in New Jersey

Educational Institutions

Apereo = 80 + ESUP = 72

£ $ €

Commercial Affiliates

Apereo = 13

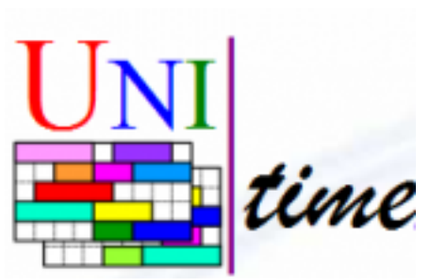
Apereo Foundation

Shared Services

Software Communities

AKA “Projects”

Open Analytics Platform



Learning Analytics initiative

Practitioner Perspective

Early Work funded by Gates Foundation

Marist College, North Carolina State
Sinclair Community College

Jisc

Université de Lorraine

Learning Analytics Definition

Applying techniques associated with **big data** to learning.

Analysing historical aggregate data to identify potential failure/success.

"**Measurement**, **collection**, **analysis** and **reporting** of **data** about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs" (1)

(1) Learning and Academic Analytics, Siemens, G., 5 August 2011, http://www.learninganalytics.net/?p=131

Learning Analytics Definition

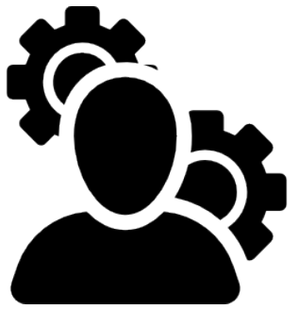
Academic Analytics

System or organisation wide data

Learner/ing Analytics

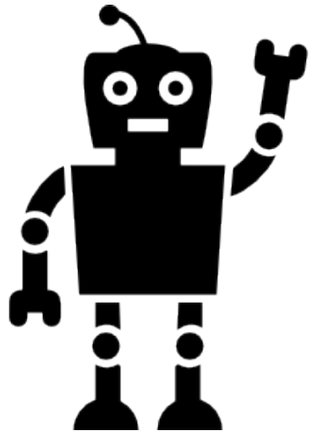
Actionable data about individuals

Learning Analytics Purpose



Present
Prediction for intervention
retention

Coming Soon
Evidence of Learning Outcomes
next gen transcripts



Future
Prediction for learning pathways
adaptive content

Institutional Lessons

“Big 6” lessons From Early Adopters

1 Define purpose

2 Moral and ethical dimensions

3 Legality and Consent

4 Governance

5 Capacity and expertise

6 Your technical approach is strategic

Technical Approach

Platform, not Application

Bundling capability with application?

Student Information System

Learning Management System

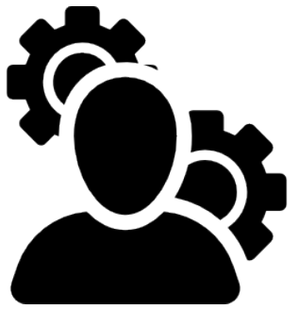
Limitations?

Other sources of data?

Libraries?

Student personal data?

Learning Analytics Purpose



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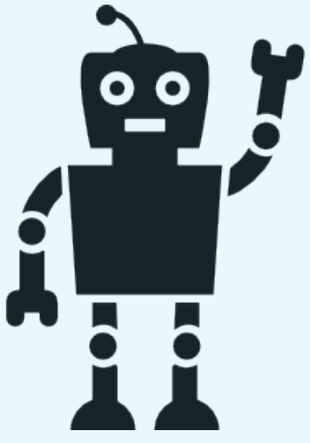

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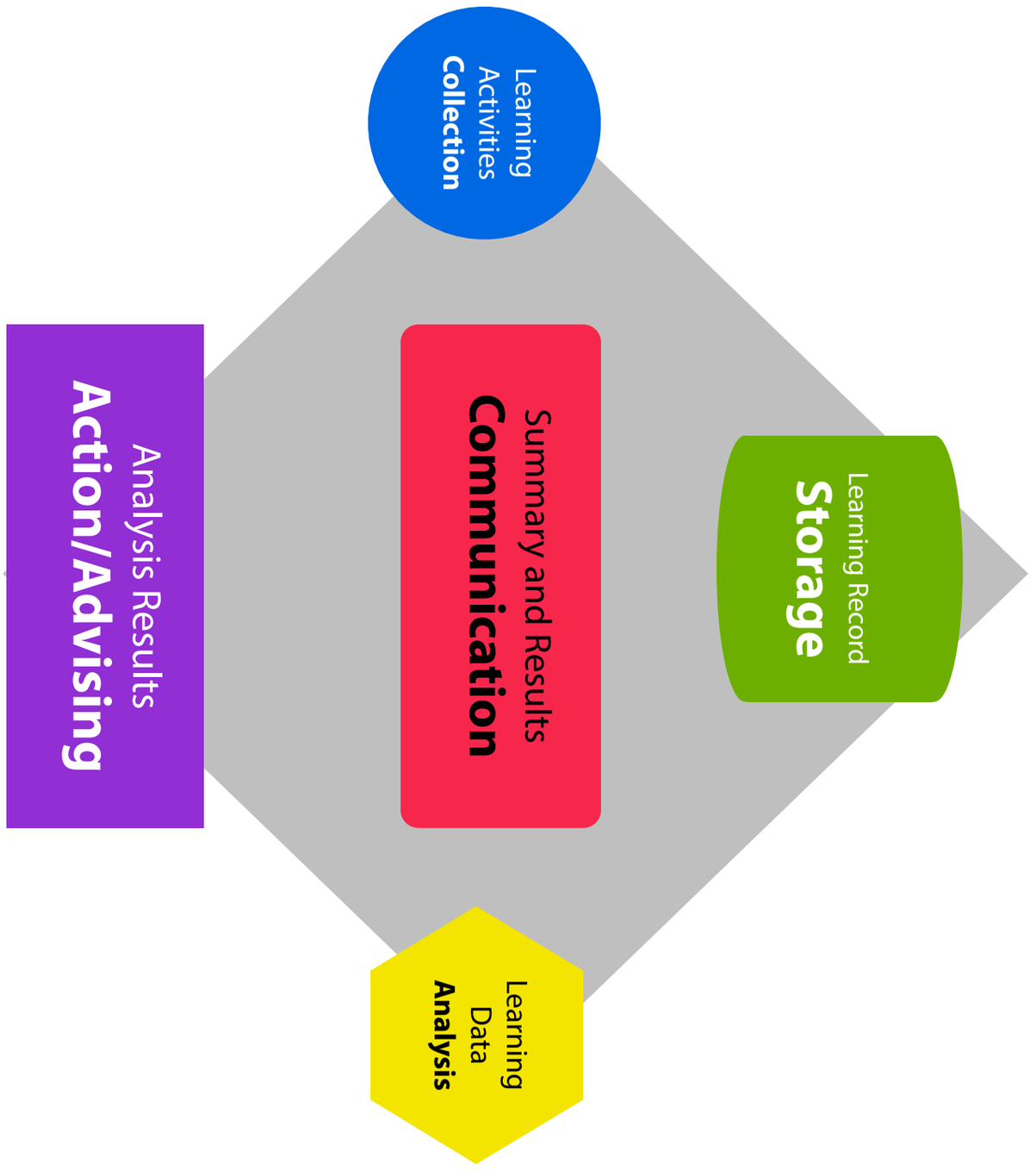
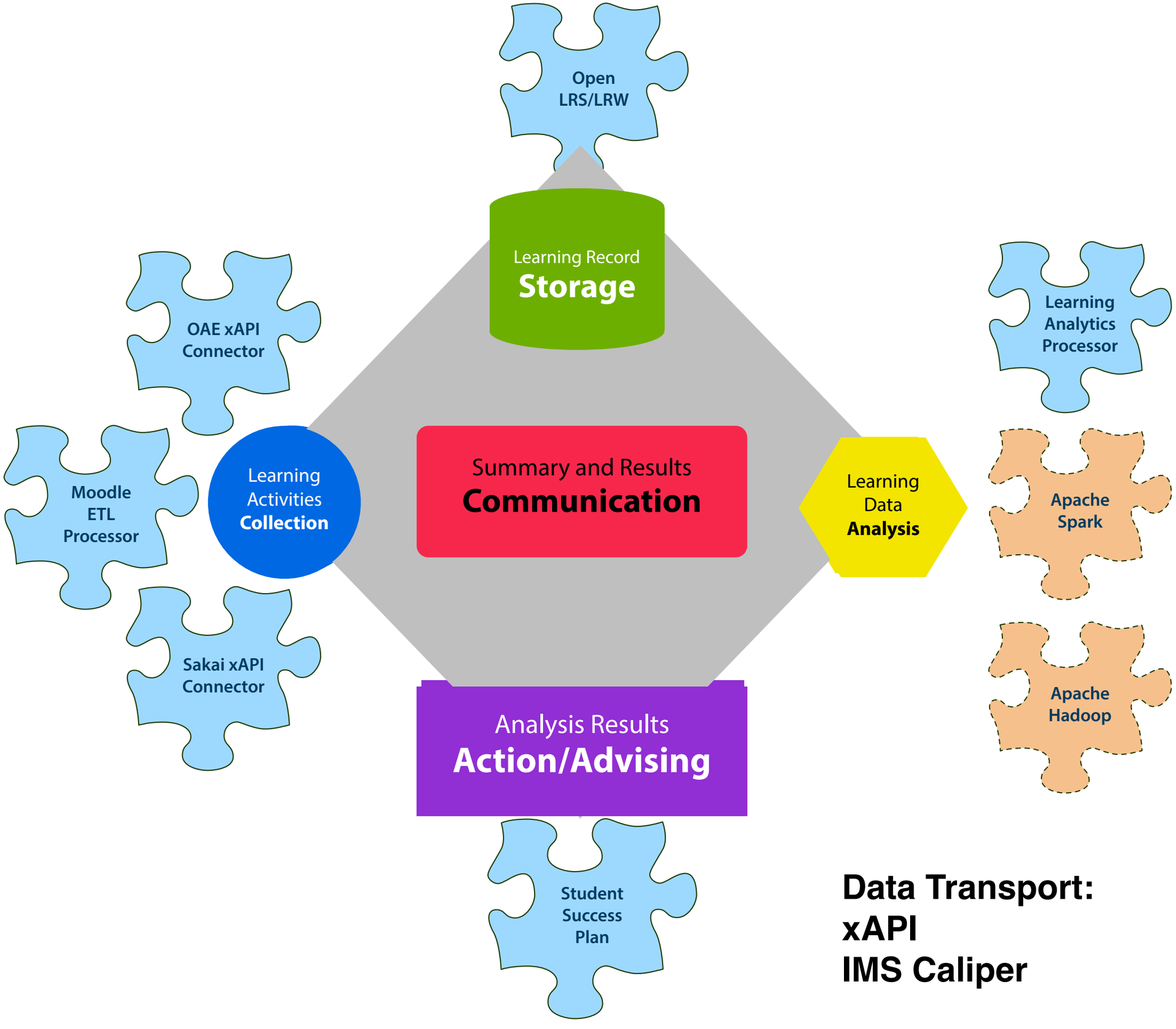
Learning Analytics Platform



Learning Analytics Platform



Data Transport:
xAPI
IMS Caliper

Learning Analytics Platform

Why an Open Platform?

Neutral and unbundled

Flexibility and choice of components

Jisc UK national analytics service

Prepared for future development

Transparency

open source, open standards, open algorithms

A Connected Network of Partners

Partnerships

Data Interoperability Standards Consortium

Established by ADL to steward xAPI

SOLAR
SOCIETY for LEARNING ANALYTICS RESEARCH

Research Practitioners

JISC

Large-scale deployments

Community

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