



ROI dashboard prototype

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Aim of the prototype

The Maturing ADL in Multinational Exercises (MADLx) project aims to design and develop a Return on Investment (ROI) analytics dashboard for use in multinational and coalition exercises.

More info about the project, aim and additional resources could be found at:
Madlx.org

Stakeholders Survey

2 waves of informal and formal surveys: 2019- 2020

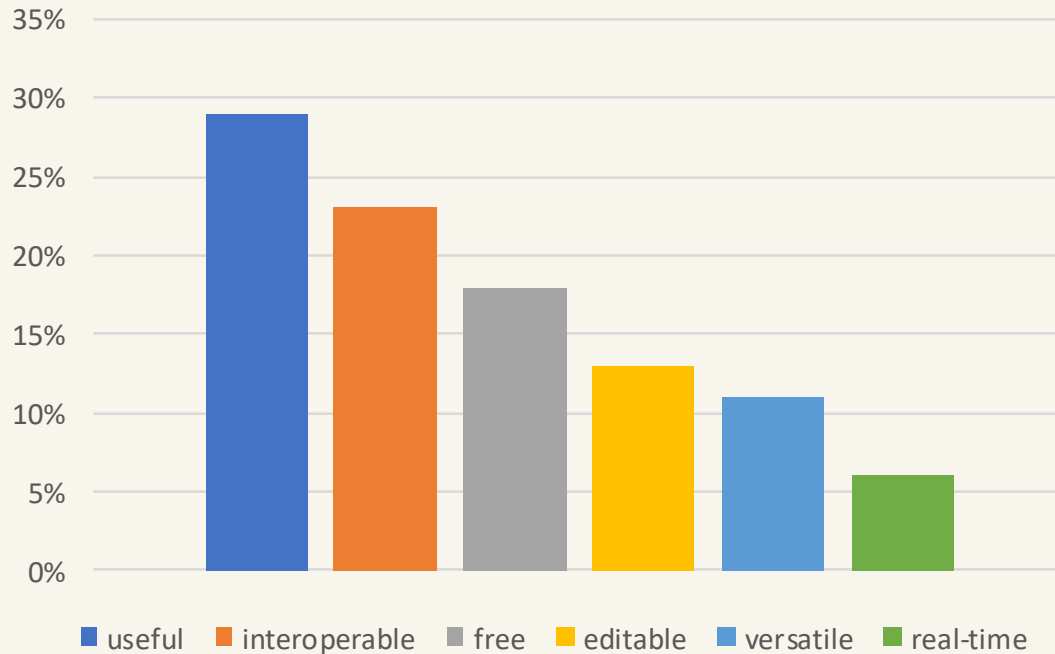
We collected:

- data on current community understanding of, experience with, and perceived risks
- opportunities related to learning analytics (particularly as tied to military exercises)
- recommendations for the types of analyses stakeholders would like to see and their suggestions on how to represent those visualizations

Survey Results: Key Requirements for LA



Key requirements



- USEFUL
- VERSATILE
- INTEROPERABLE
- EDITABLE
- FREE
- REAL-TIME

MADLx ROI DASHBOARD

- **USEFULNESS:** The prototype is tied to multinational exercises, and it directly addresses stakeholder lack of understanding about what learning analytics is and how useful it can be.
- **VERSATILITY:** The prototype provides multiple user profiles with different levels of access, satisfying the needs of trainers and trainees as well as managers, flag officers, and exercise organizers.
- **INTEROPERABILITY:** The collection and retrieval of Experience API data (xAPI) and non-xAPI data from a wide variety of systems utilized by stakeholders in mission rehearsals.
- **EDITABILITY:** Each visual representation can be edited or changed with another type or form, color, or data input.
- **FREE:** The prototype is fully built on a set of open-source technologies.
- **INSTANTANEOUS:** Live connections to a Learning Record Store (LRS) and potentially other databases, enabling actionable insights into the learning process in real-time.

ROI Dashboard prototype

<https://demo.madlx.org>



Functionalities:

Each user of this demo gets its own ID so this dashboard is actually yours

Explore the default visualizations

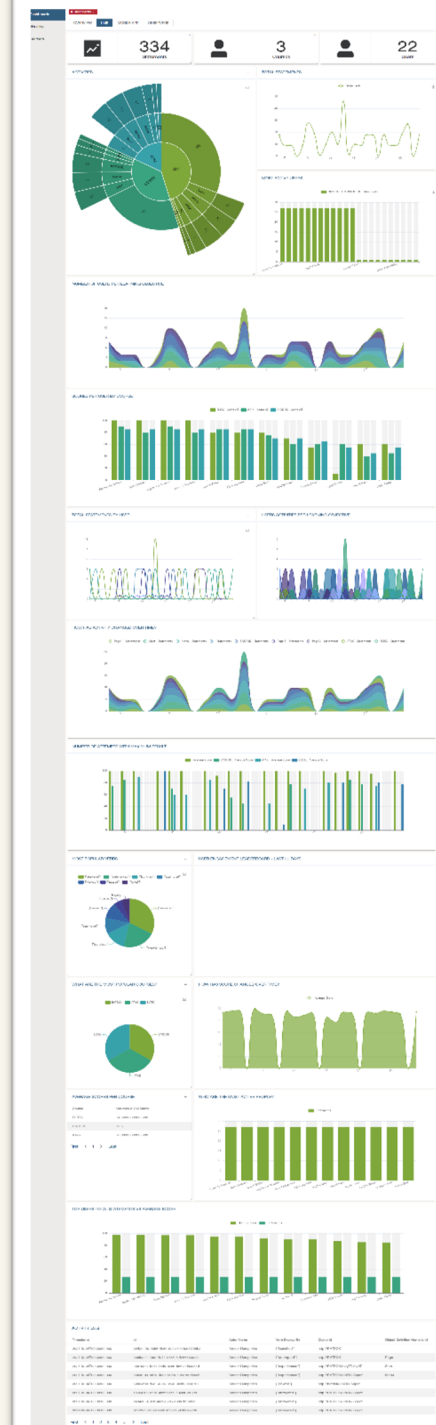
Overview page: correlation between variables



Functionalities:

**LMS source and
Mobile Learning as examples for any xAPI
driven learning source**

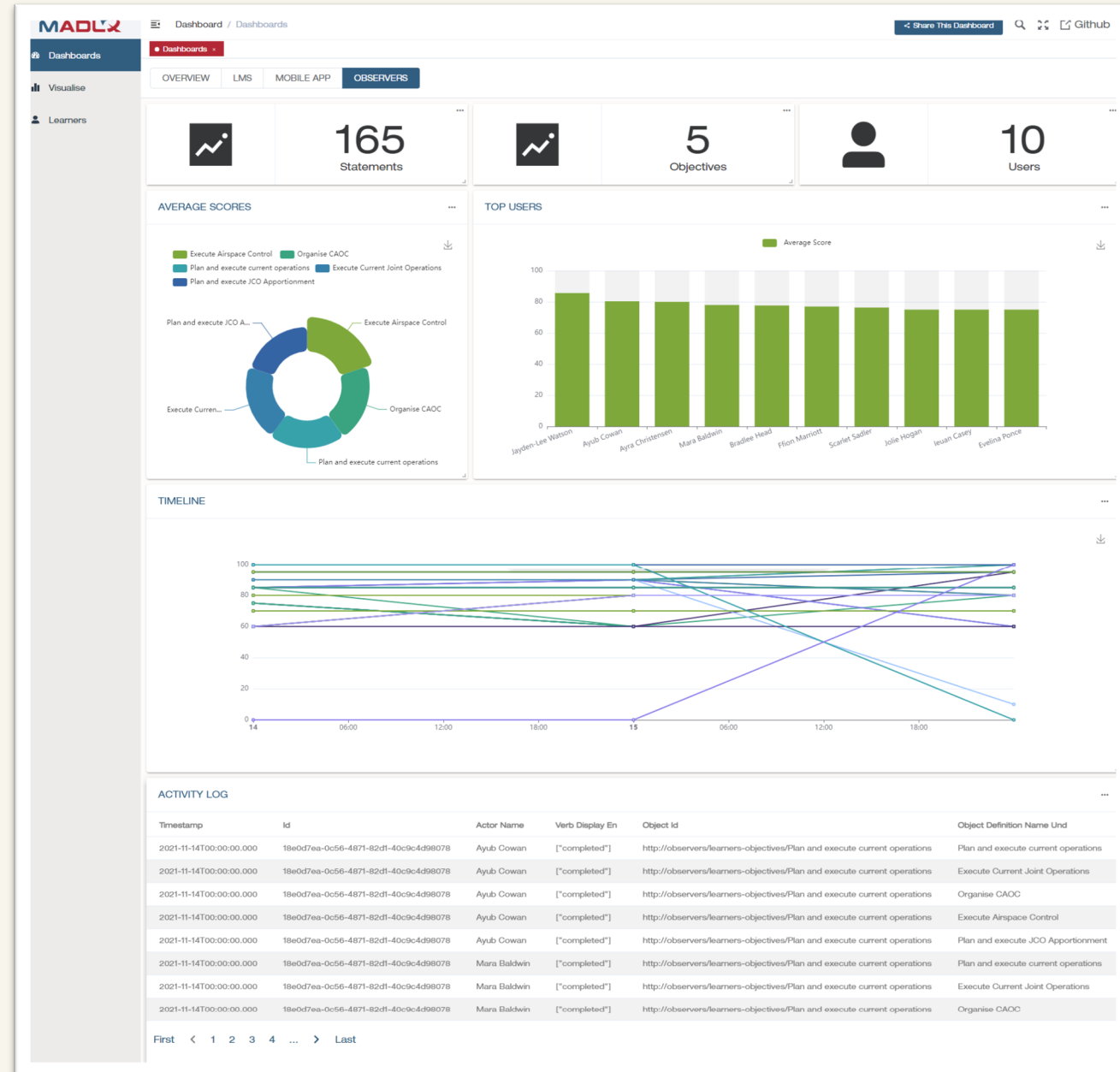
Over 15 example data visualizations



Functionalities:

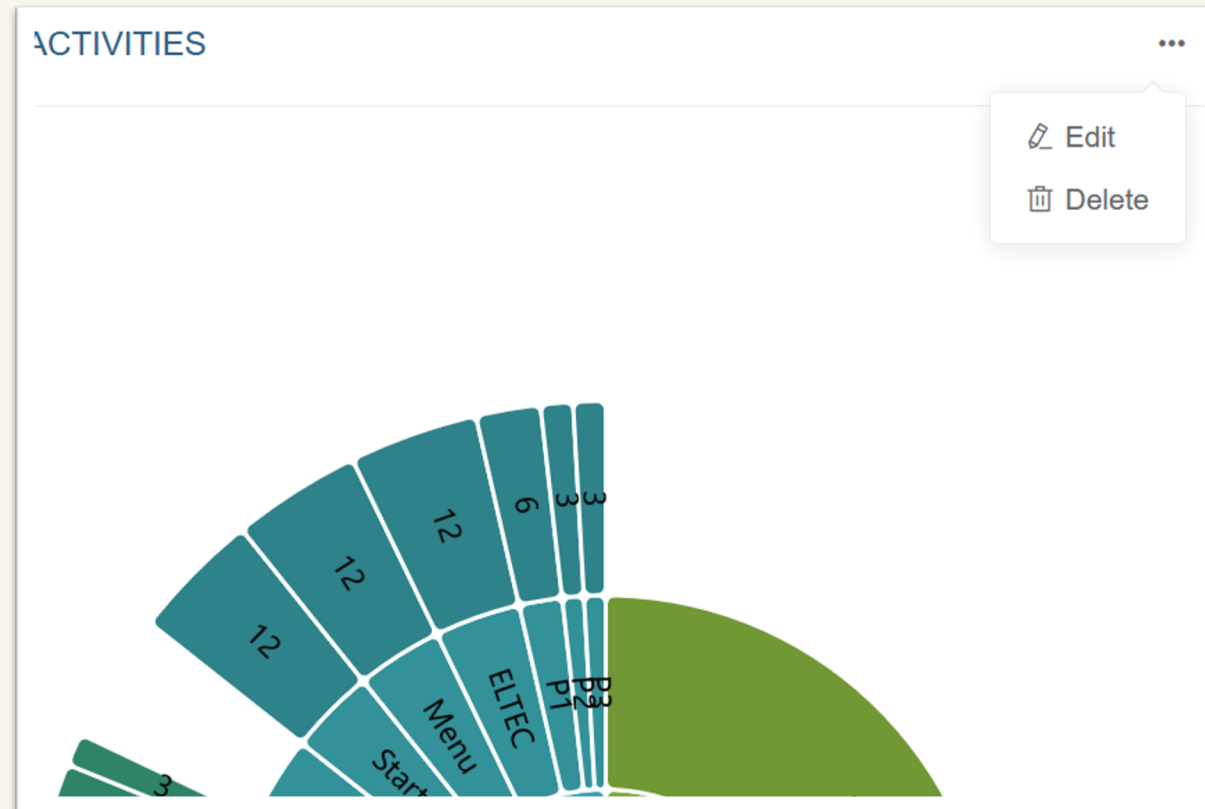
Observer data comes in many variations

Can utilize any of existing data visualization templates



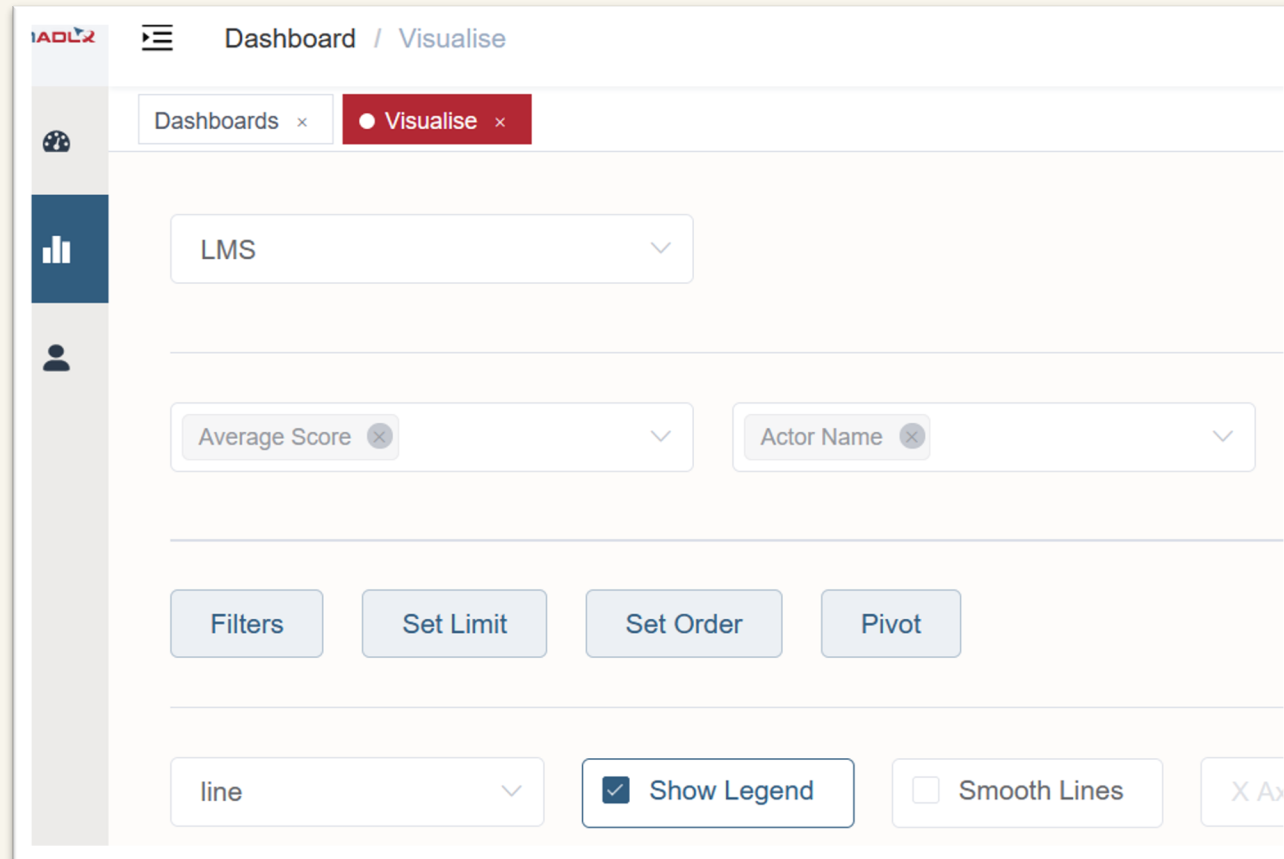
What you can do:

- Edit, rename and relocate visualizations
- Delete existing data visualizations



What you can do:

- Create new and add to dashboard



What you can do:

- Explore learners

- Get granular insight into their learning behavior

The screenshot shows the MADLX interface with a sidebar on the left containing icons for Dashboards, Visualise, and Learners. The main area displays a grid of learner profiles, each with a placeholder icon, name, and email address.

Name	Email
Alfred Daniel	mailto:alfredaniel@website.org
Ameer Humphries	mailto:ameerhumphries@website.org
Ayra Christensen	mailto:ayrachristensen@website.org
Bradlee Head	mailto:ayubcowan@website.org
Bradlee Head	mailto:bradleehead@website.org
Crystal Cross	mailto:crystalcross@website.org

The screenshot shows the MADLX dashboard for learner BRADLEE HEAD. It features two bar charts, a learning activities timeline, and two data tables.

AVERAGE SCORE BY SOURCE

Source	Average Score
Mobile APP	~95
LMS	~85
Classroom	~80

AVERAGE SCORE BY COURSE

Course	Average Score
MOB_ELITEC	~95
Execute Airspace Control	~90
Organise CADC	~85
MOB_BATDOCK	~80
Plan and execute JCD Appointments	~75
Plan and execute Current Operations	~70
Execute Current Joint Operations	~65
MOB_ATAK	~60
ATK	~55
BATDOCK	~50
ELITEC	~45

LEARNING ACTIVITIES TIMELINE

A line chart showing activity levels over time, with peaks corresponding to the data in the tables below.

VERBS TIMELINE

Timestamp	Id	Verb Display En	Object Definition Name Und	Context Context Activities Parent
2021-10-01T00:00:00.000	1942e490-9009-4c09-892c-08453d07895d	["touchend"]		MOB_ELITEC
2021-10-01T00:00:00.000	80c89e34-3388-4544-8854-03f9f669394e	["mouseenter"]	Page 5	MCR_ELITEC
2021-10-01T00:00:00.000	39870997-89d9-46da-b2d9-b057c8b9954d	["mouseenter"]	Start	MOB_ELITEC
2021-10-01T00:00:00.000	99c3f883-4d73-467c-848d-c0e0719d8108	["mouseenter"]	Menu	MCR_ELITEC
2021-10-01T00:00:00.000	60d9d828-d521-4806-8d56-8c0bd5a08751	["viewed"]		MOB_ATAK
2021-10-01T00:00:00.000	c9684789-a77c-456f-8c0e-716d073c2c2f	["viewed"]		MOB_BATDOCK
2021-10-01T00:00:00.000	a434c051-9c31-486b-874b-c90a791682a	["answered"]		MCR_ATAK
2021-10-01T00:00:00.000	9f632010-23a2-449f-8f1c-5a9c9f0e923b	["answered"]		MOB_ATAK

COURSE RESULTS

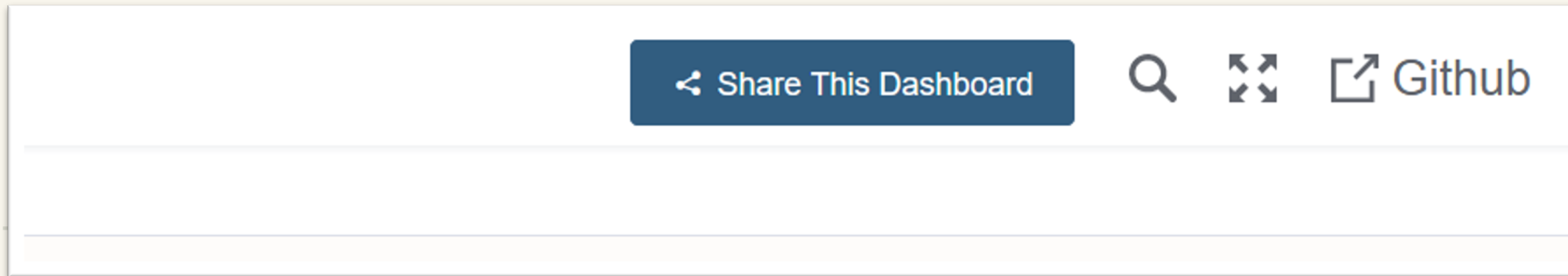
Object Definition Name Und	Score All
ELITEC	100
MCR_ELITEC	100
Menu	100
Execute Airspace Control	100
Organise CADC	95
ATAK	90
MCR_ELITEC	90
BATDOCK	85

Don't forget!

- To share your prototype dashboard

OR

- To download each data visualization



OR send us feedback

ROI Dashboard prototype open source can be found here:

<https://github.com/Jefferson-Institute/madlx-prototype>



You can also:

- Use this prototype to make your own dashboard**
- Use this dashboard in your exercise by connecting your own LRS**
- Join the MADLx working group and Github community to influence further development**

Thank you !

Join our Stakeholders' Working Group

