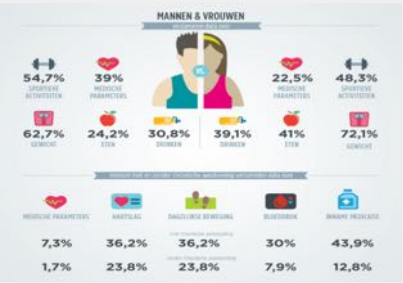
EDULAB

A DATABUS TO INCREASE DATA-LITERACY IN BRUSSELS SCHOOLS

Prof.dr. Wendy Van den Broeck

VUB
VRIJE
UNIVERSITEIT
BRUSSEL

EDULAB PROJECT

SMIT	MEDIA	SMART CITIES	SMART HEALTH & MANUFACTURING
LIVING LABS			
POLICY & MARKETS		Smart Flanders	
PRIVACY, ETHICS & LITERACY		Privacy Impact Assessment Scope of PIA — Is a PIA required? What needs to be evaluated how? Framework to requirement — Identify relevant privacy requirements Mapping of risks — Current/proposed data processes What is not acceptable? Solution Plan — What to change, by whom and when?	

SMART EDUCATION CHALLENGE

Combining Research & Learning Environments: LIVING LAB for Smart Education

How can we implement the Living Lab approach to benefit smart education?

Placing emphasis on developing and supporting seamless (formal/informal), and hybrid (digital/physical) self-regulated learning strategy supports for schools, educators, and learners:

- Setting up learning environments employing the living lab approach, in which use cases can be iteratively co-constructed and piloted with schools, educators, and learners for SRL promotion and support.

- Seamless: connecting and allowing for greater insight into learning episodes and development beyond the classroom walls and formal school boundaries, into the neighborhood and home.

DATABUS

HIGH-TECH OPEN LEARNING UNIT

February 2019

Flemish Schools and playgrounds in Brussels Region

Children 10-18 years old

Focus on data-literacy

OPENING UP EDUCATION TO AND WITH THE CITY

INNOVATION - laboratory for innovative teaching, experimentation, reimagining learning & social innovation
AUTHENTICITY - focus on authentic learning environments & hands-on projects
DATA-DRIVEN - providing data skills for teachers/students, data for researchers
TECHNOLOGY - integrating technology with student-centered learning approaches
FLEXIBILITY - futureproof: smart & seamless learning in multi-modality 'classrooms'
CONNECTED - connectivity & interaction with and within the city
CO-CREATED - living lab approach/ co-creation
COMMUNITY -community assembly space & involvement of multiple stakeholders
CHANGE - behavioral change monitoring
MEASURABLE - measurable learning gain through learning analytics

WHY FOCUS ON DATA?

DATAFIED CHILDREN AND YOUTH

Automated Homes / Datafied Families

Surveillance and Privacy

Digital Citizenship

Social Media Narratives

Mobile Apps and Family Data

Techno-Futures

VRIJE UNIVERSITEIT BRUSSEL

SMART CITIES DEMAND SMART-ER EDUCATION

Data Literacy: *"the desire and ability to constructively engage in society through and about data."*

"Desire and ability": technology as a magnifier of human intent and capacity.

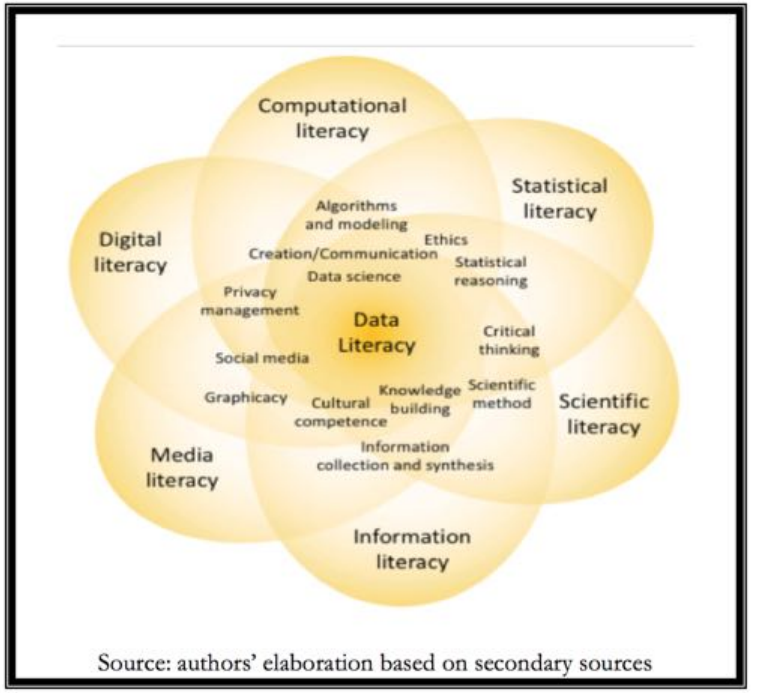
"Ability": literacy as a continuum, moving away from the dichotomy of literate and illiterate.

"Data" is understood broadly as "individual facts, statistics, or items of information."

Constructively engage in society: an active sense of purpose—literacy (sought, deployed and measured) in relation to specific goals that are deemed 'constructive'.

"through or about data": the possibility for individuals to engage as data literate individuals.

Figure 3: How different modern types of literacies interact



Source: authors' elaboration based on secondary sources

DataBus

Real-life settings (& data)

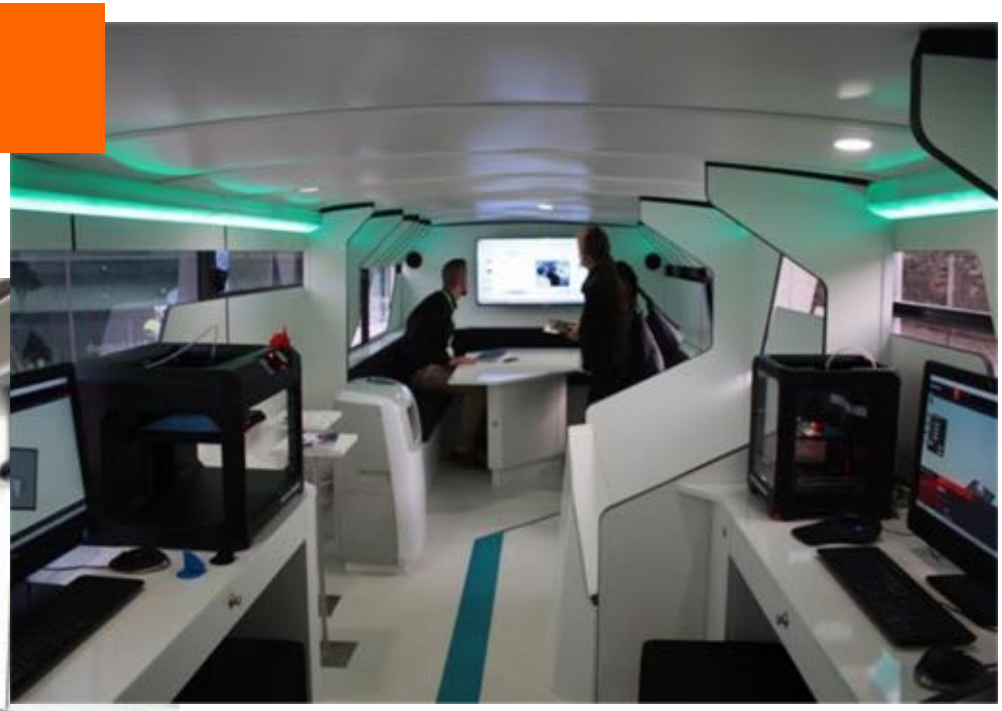
Hands-on project-based learning experiences

Innovative pedagogy in next generation digital learning environments

Data literacy development as a crucial skill for future citizens and employees

DataBus

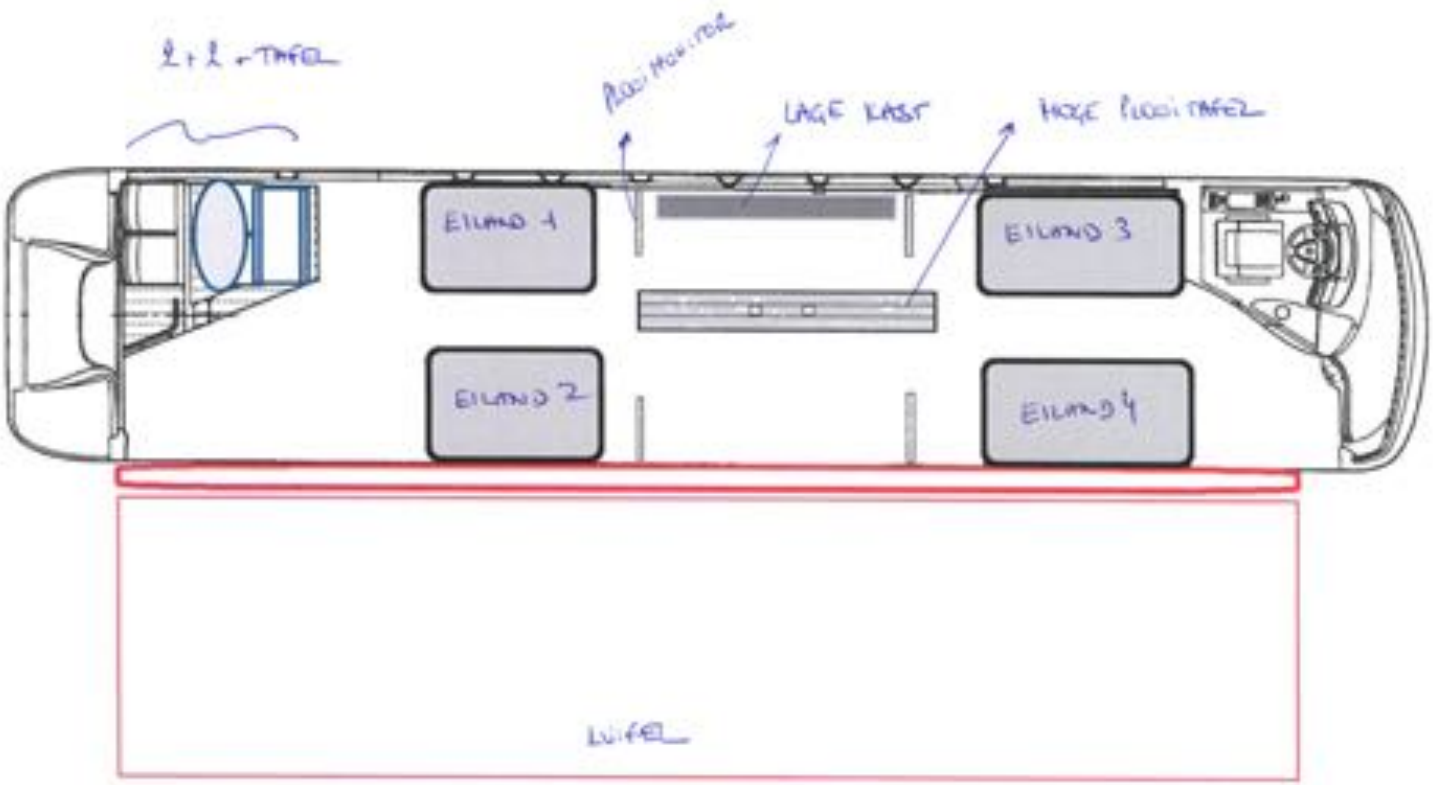
Mobile High Tech Open Learning Unit



VUB BRUSSEL

DATABUS

Unique and **high-tech opportunity** for teachers and students to collect and develop their data literacy whilst employing **learner-centered pedagogical approaches**, and having access to **new and emerging digital tools** and **innovative learning environments.**



VRIJE UNIVERSITEIT BRUSSEL

The DataBus School Journey:

For Flemish Schools in Brussels & Flanders:
Teachers & Students (target ages 10-18)

Before operationalization	Pre-Bus Week	School Week	Post-bus follow-up
Scheduling of school intervention weeks User testing of tools and multimodal data aggregation & storage Delivery of the teacher-selected lesson plan pack & preliminary tool testing.	• Consent Forms: Opt-in and clear informed consents for students. • Lesson Plans (Part 1): Students own data collection (self-report) & monitoring (multiple streams via smartphone as well as wearables).	• Students and classes that have registered get to use the bus • Time-allocated uses • Lesson plan driven or shorter term activity based using the buses high-tech facilities and short-project MakerEd options.	• Online (dependent on kits).. • Website materials & resources on data literacy. • Community of Practice (via social media e.g. Facebook group for teachers who have partaken - for continued work, inputs, discussion and exchange etc.)

DATA LITERACY LESSON PLANS 'PEDAKITS'

Integrating data literacy options

into existing subjects/class themes that make use of some element of data literacy is a way to integrate the systematic and formal teaching of data literacy into already (full curricula) & attract teachers/schools.

Making data work for students

Integrating students' own collected data through

- Project-based learning approaches
- 6-8 Data Literacy Kits to select from (lesson plan booklet)
- Pre-During-Post Phases for all kits: *In the context of a data literacy course where students will solve problems by collecting their own data, analyse the data, manipulate, visualise & transform their data and communicate their findings*

Connecting to the neighbourhood and the city

THANK YOU!

QUESTIONS?