EXPLAINING PUBLIC BUDGETS WITH FUZZY LINGUISTIC SUMMARIES

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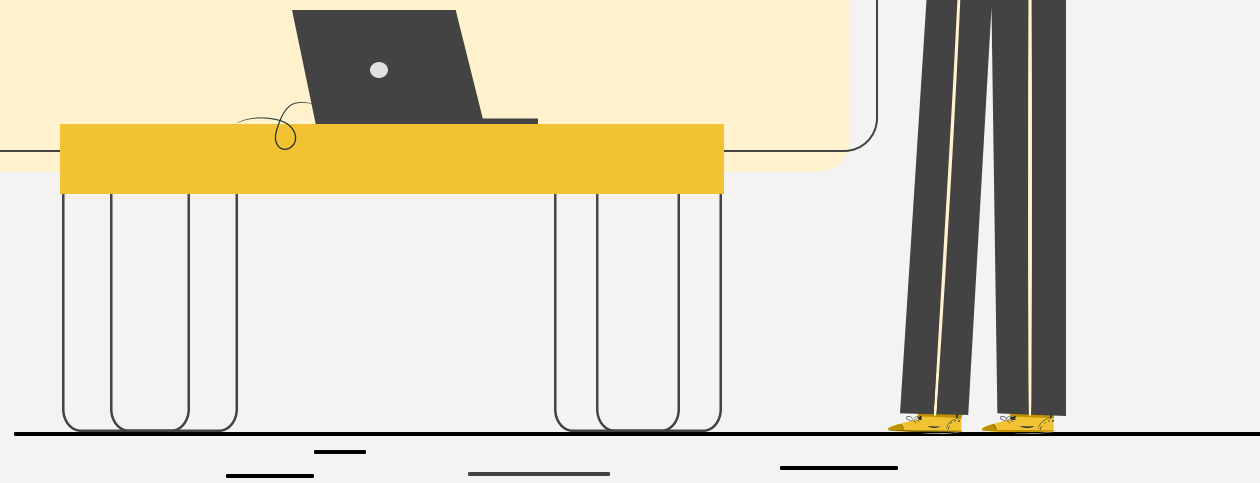
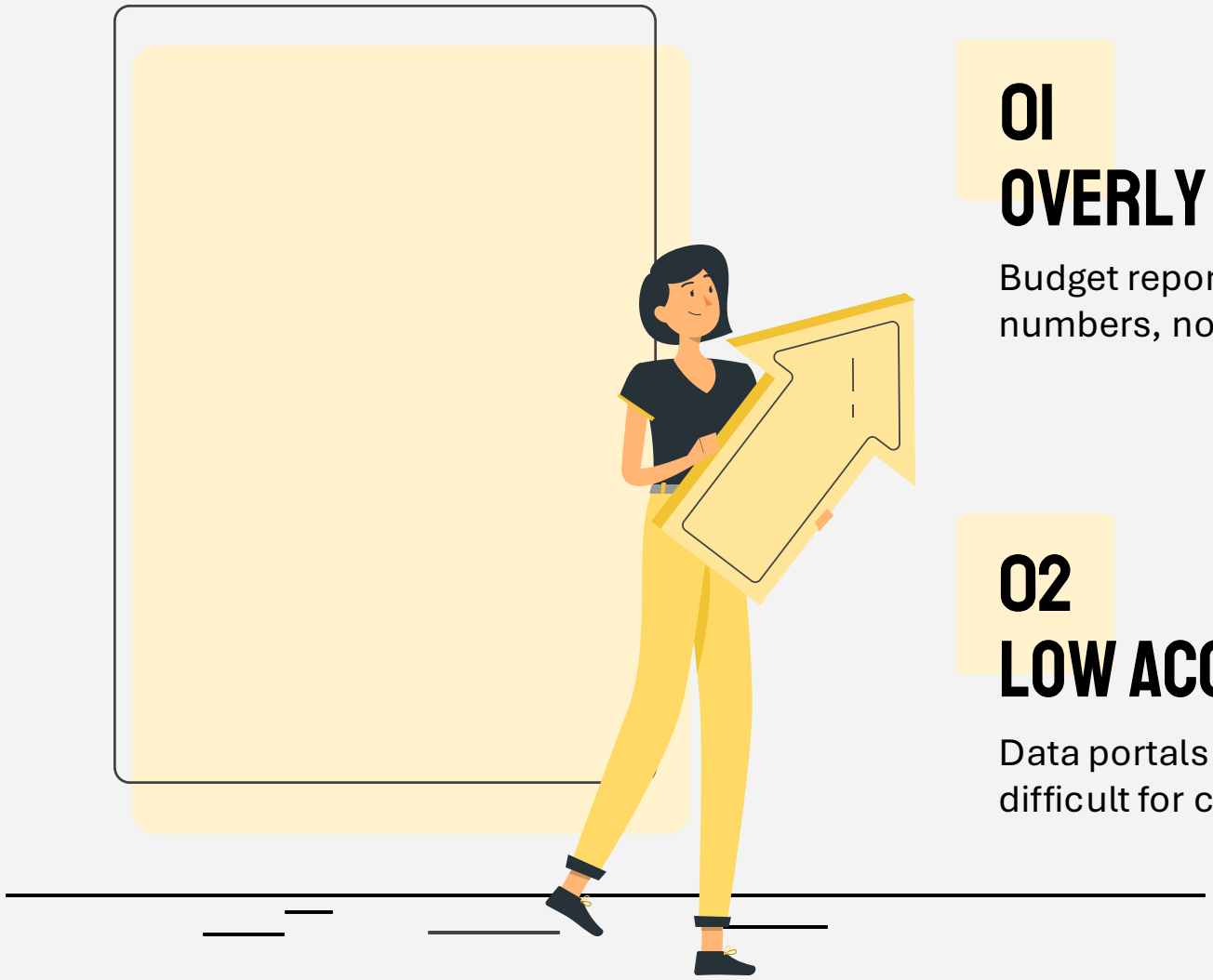
INTRODUCTION

In Switzerland, public budgets are open and accessible — yet few people truly understand them.
The data is there, but it often feels **too technical, too distant, and too hard to interpret**.



PAINS



01
OVERLY TECHNICAL

Budget reports are full of numbers, not meaning.

02
LOW ACCESSIBILITY

Data portals exist but are difficult for citizens to use.

03
LACK OF ENGAGEMENT

People feel disconnected from financial decisions.

04
CONCLUSIONS

It’s hard to see what matters most in public spending.

LITERATURE REVIEW

01
INFORMATION GAP

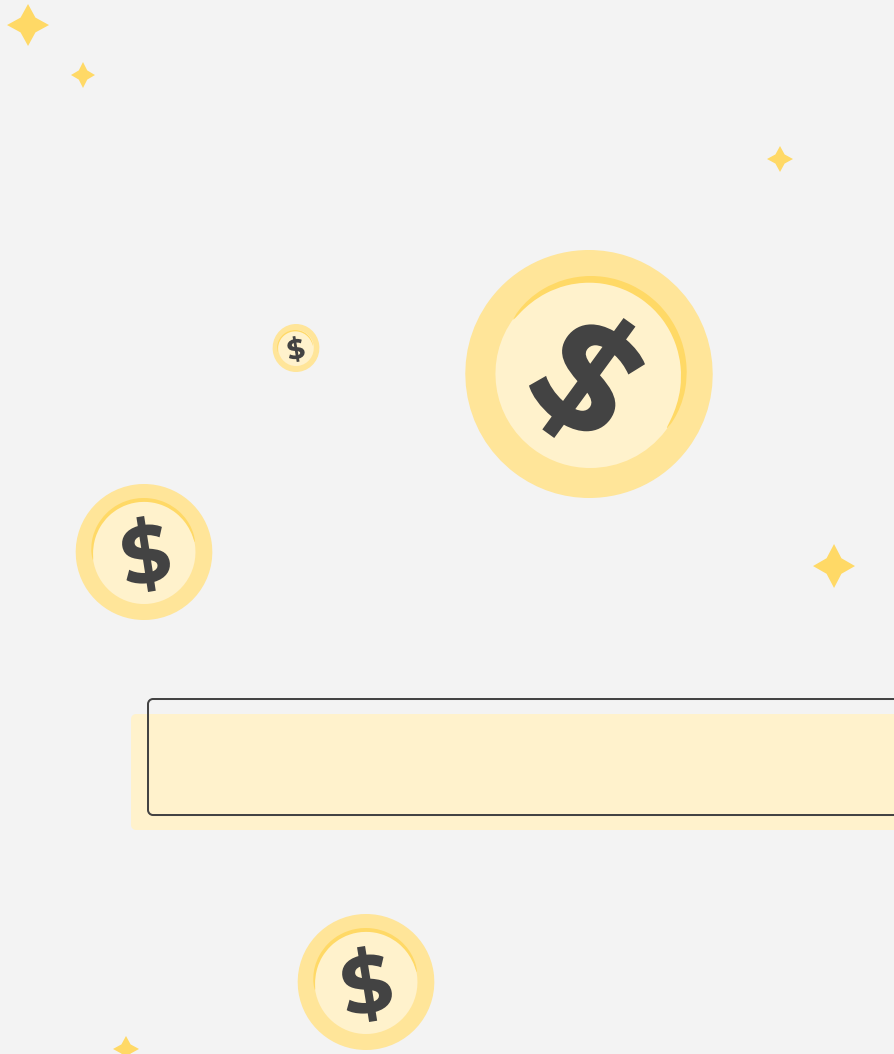
What citizens want to know about their government's finances.
Jordan et al., 2016

02
BUDGET TRANSPARENCY FOR ENTERPRISE

Modernize public finance with AI.
Microsoft, 2025

03
FUZZY MODELLING

Transparency and Reproducibility in Participatory Systems.
Olazabal et al., 2018



“Numbers have an important story to tell. They rely on you to give them a clear and convincing voice.”

—STEPHEN FEW (DATA VISUALIZATION EXPERT)

LET BUDGETS SPEAK FOR THEMSELVES

By combining **open budgets** with **intelligent models**, we can uncover **how priorities shift over time** and explain it in **simple, human language**.

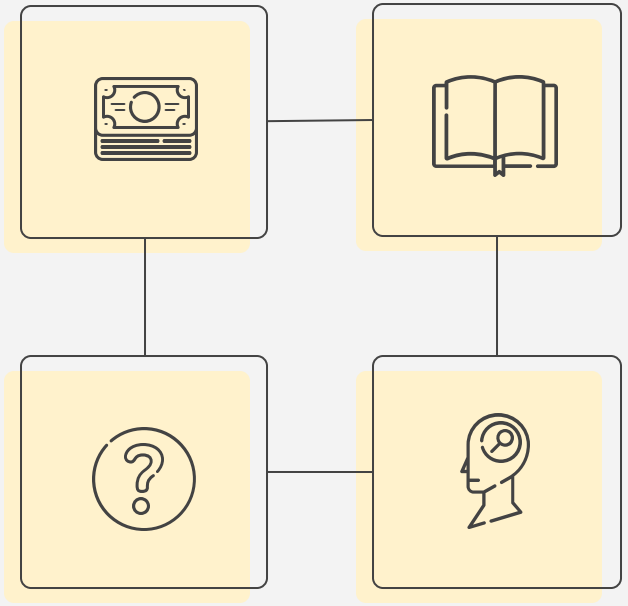
HUMANISTIC VALUES

TRANSPARENCY

Everyone can clearly see and understand where public money goes.

PARTICIPATION

People can ask questions and engage with public decisions.



FAIRNESS

Data access and explanations are equal for all citizens – not just for experts.

HUMAN-CENTERED DESIGN

The system communicates naturally, adapting to how humans think and speak.

ARTIFACT

How is the government planning money for education?

Since 2019, education spending has gradually decreased, while transport and healthcare have received more funding.

So what are they spending more on now?

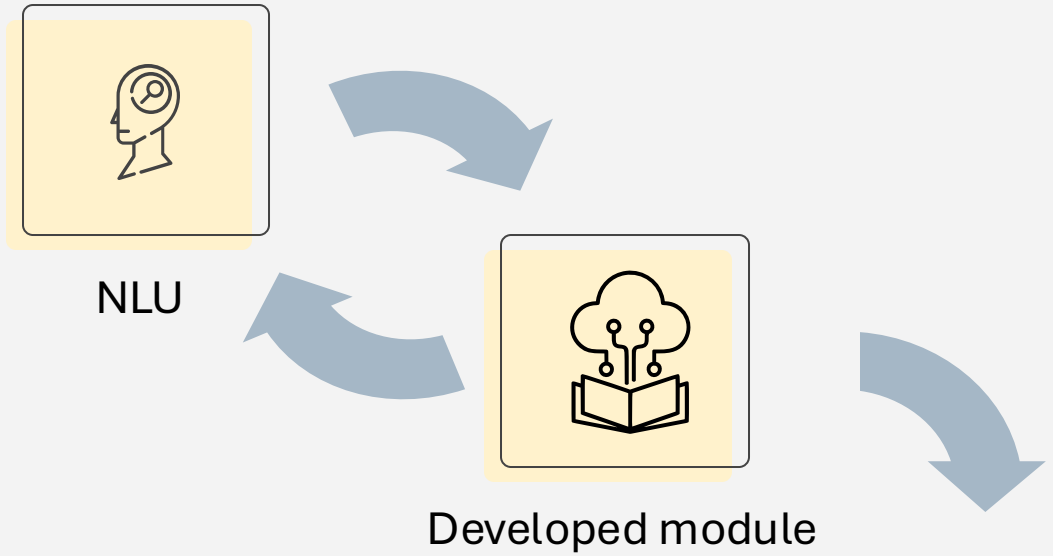
The biggest increases are in digital infrastructure and energy transition programs

Can you explain why these changes happened?

These shifts reflect a policy focus on sustainability and modernization – redirecting funds from education to infrastructure and green energy.

Proof of concept

how such idea might be imlpemented in reality.



Stadt Zürich
Open Data

ARTIFACT

How is the government planning money for education?

{ ”timeline” : ”all”, “field” : “education”, “generalization_level” : ”1” … }

Since 2019, education spending has gradually decreased, while healthcare have received more funding.

{ “message” : “Since 2019…”, “request” : {…} }

So what are they spending more on now?

{ ”timeline” : ”all”, “field” : “all”, “generalization_level” : ”1” … }

The biggest increases are in digital infrastructure and energy transition programs

{ “message” : “Since 2019…”, “request” : {…} }

THANKS

Does anyone have any questions?

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