

AI 4 Social Protection

Overcoming Challenges and Creating Opportunities

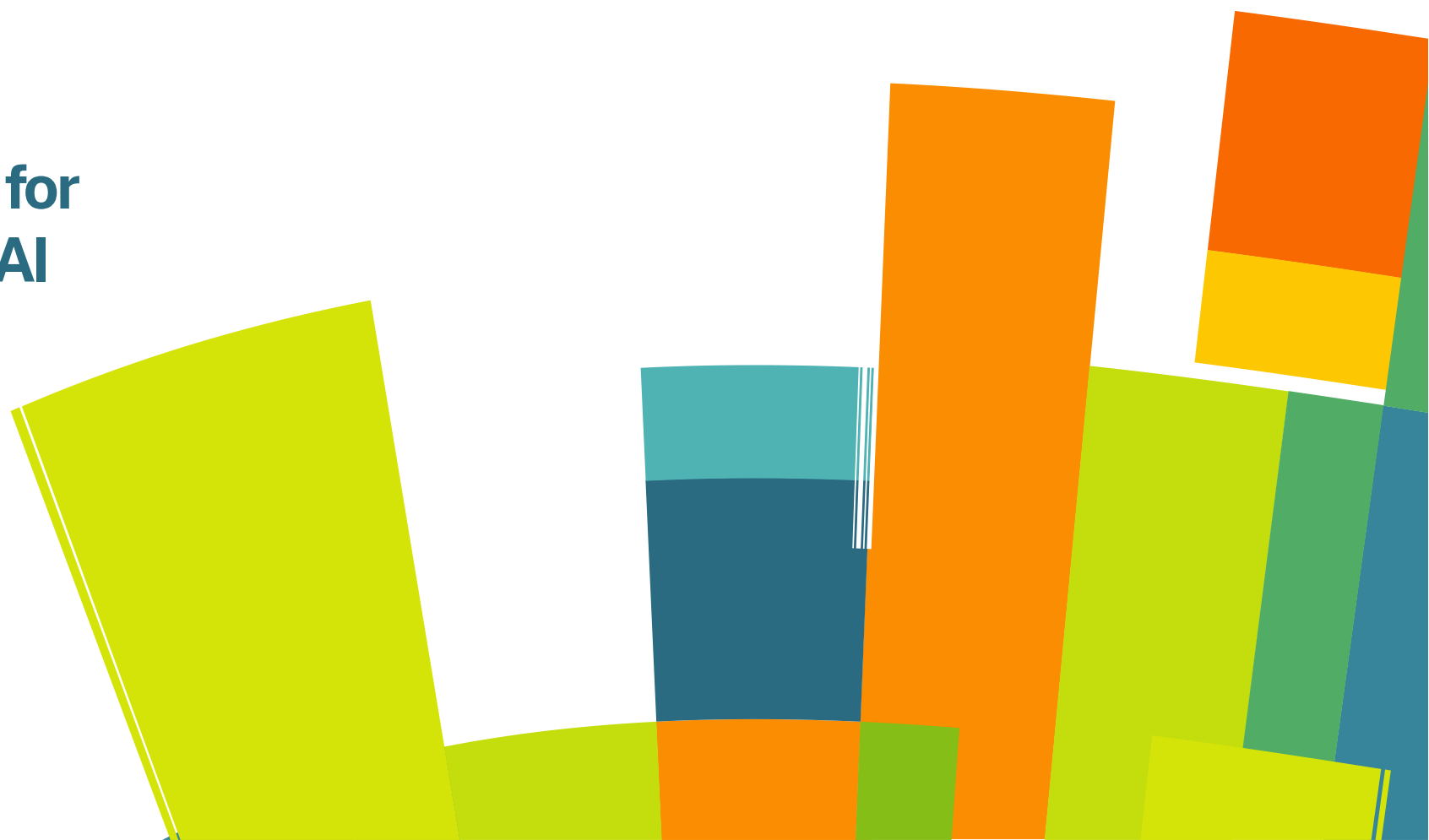


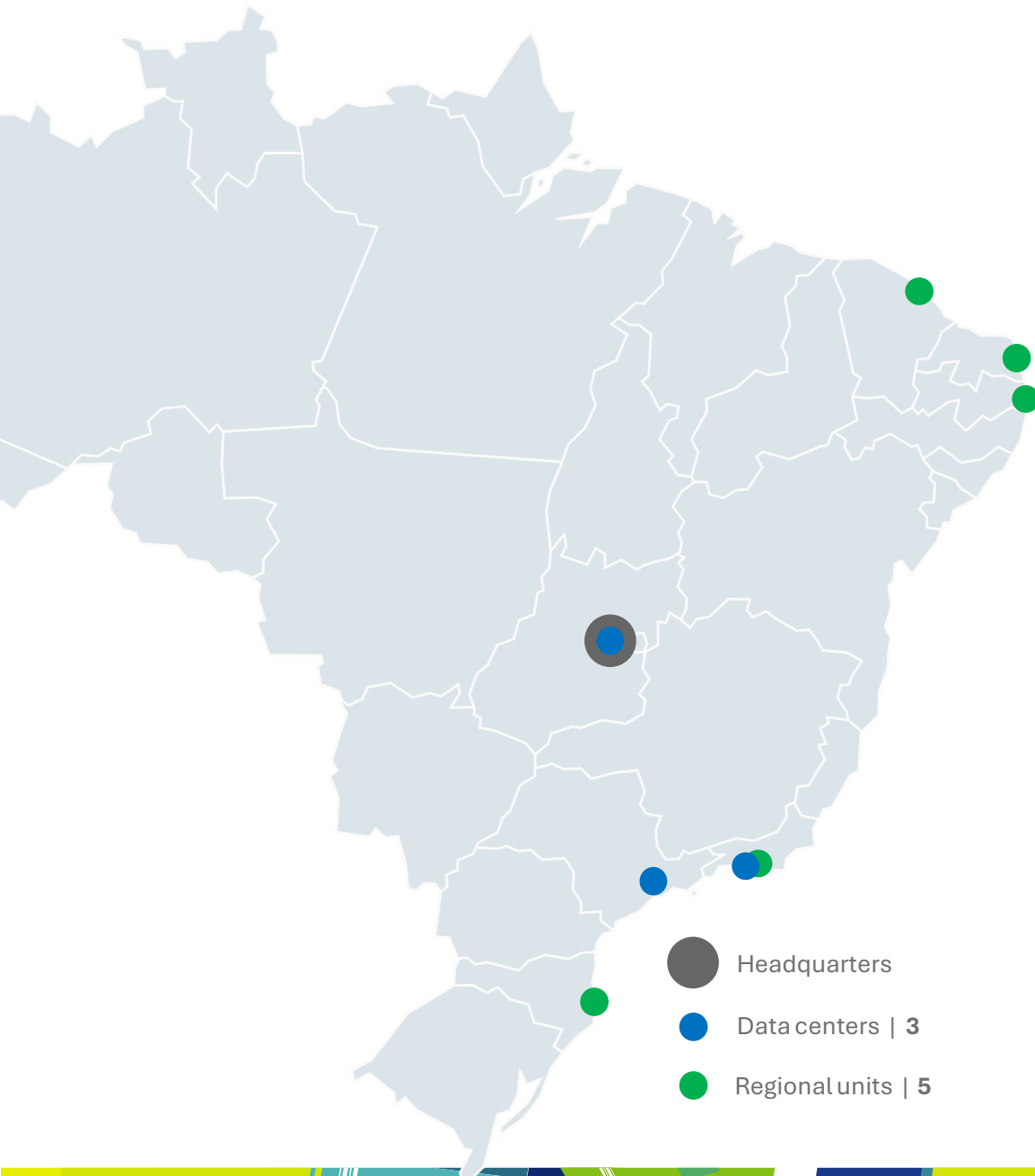
Session 3

Enablers and Challenges for Implementing and Using AI

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President of Dataprev





Mission

Organize the social data hosted by government to make it accessible and useful to society.

Vision

Improve people's lives with technology that empowers social policies and the National Data Infrastructure.

State-owned company

3 data centers

Tier III certificate design, facilities and operations

3.186

employees

+400

social security, assistance and labor services

+44 billion

records in its databases

+140 million

accesses to digital services monthly

Social protection numbers

Social Security

5.2 million

Benefits granted annually

+40 million

Benefits paid monthly

+10 million

Benefits analysis completed annually

Labor and Employment

6.9 million

Individuals served by
unemployment insurance

US\$ 6.6 billion

Paid in unemployment insurance

US\$ 1.5 billion

In avoided improper payments/risk
analysis in unemployment insurance

Social Assistance

19 million

Social assistance registration database
updated with social security registration

41 million

Families with automatic validation in the social assistance database/
Integration between Federal Government systems

Road infrastructure



Official statistics

Social benefits

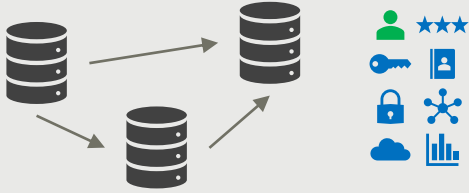
Public services

Artificial Intelligence

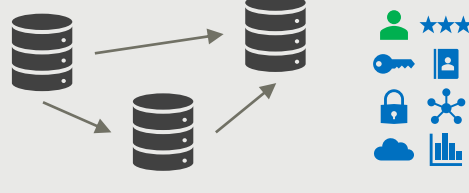


National Data Infrastructure

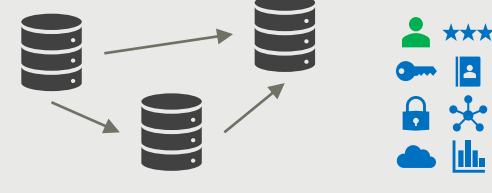
Social Ecosystem



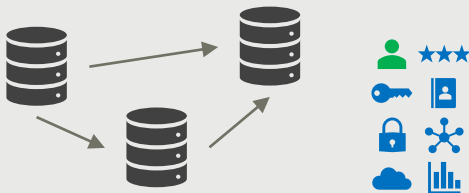
Rural Ecosystem



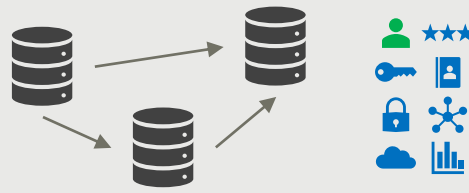
Fiscal Ecosystem



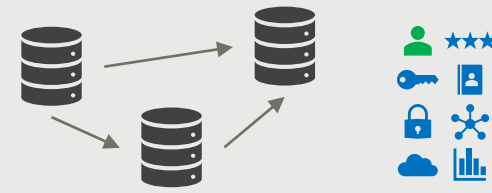
Public Management Ecosystem



Health Ecosystem



Education Ecosystem



1st sector



2nd sector



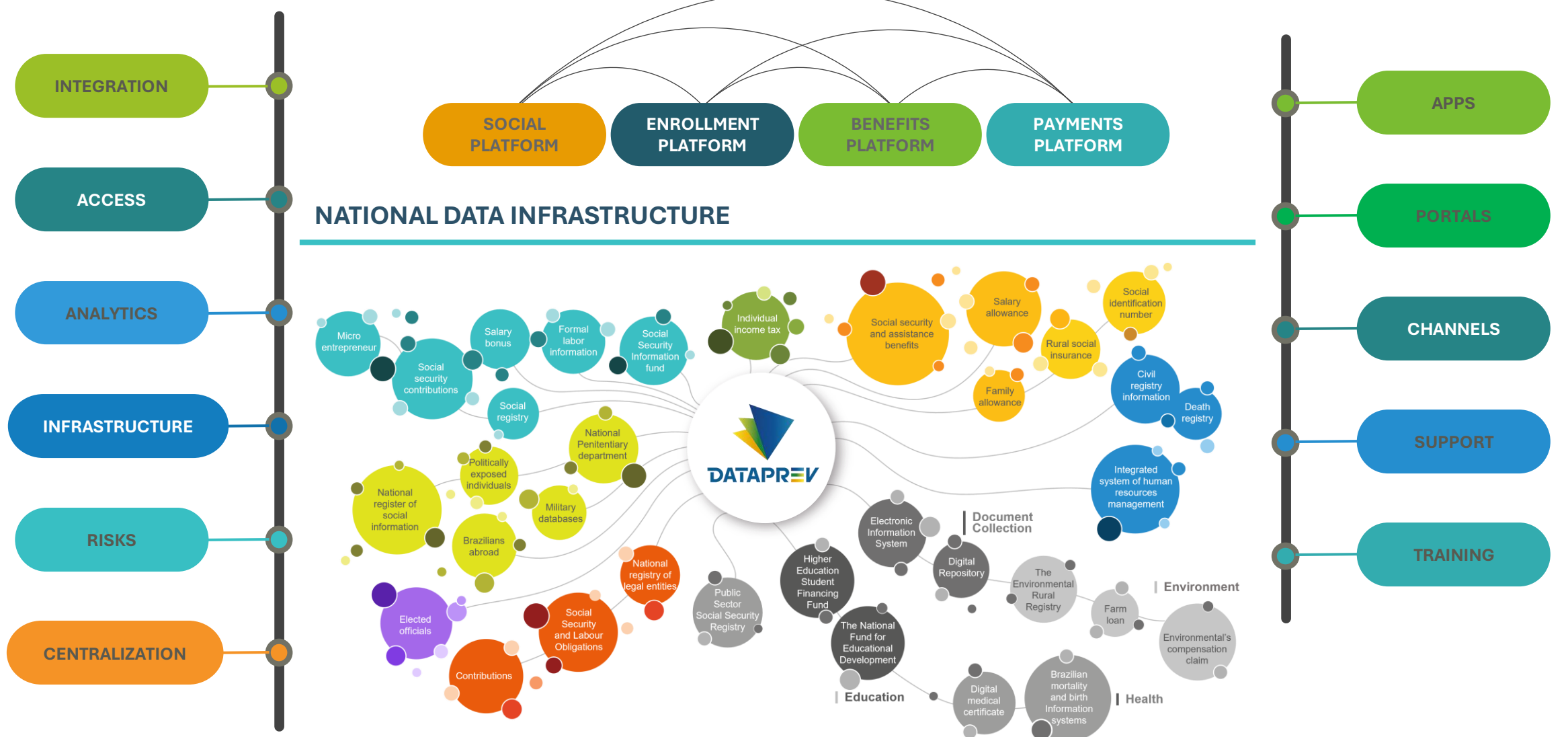
3rd sector

Transforming structural systems into a platform

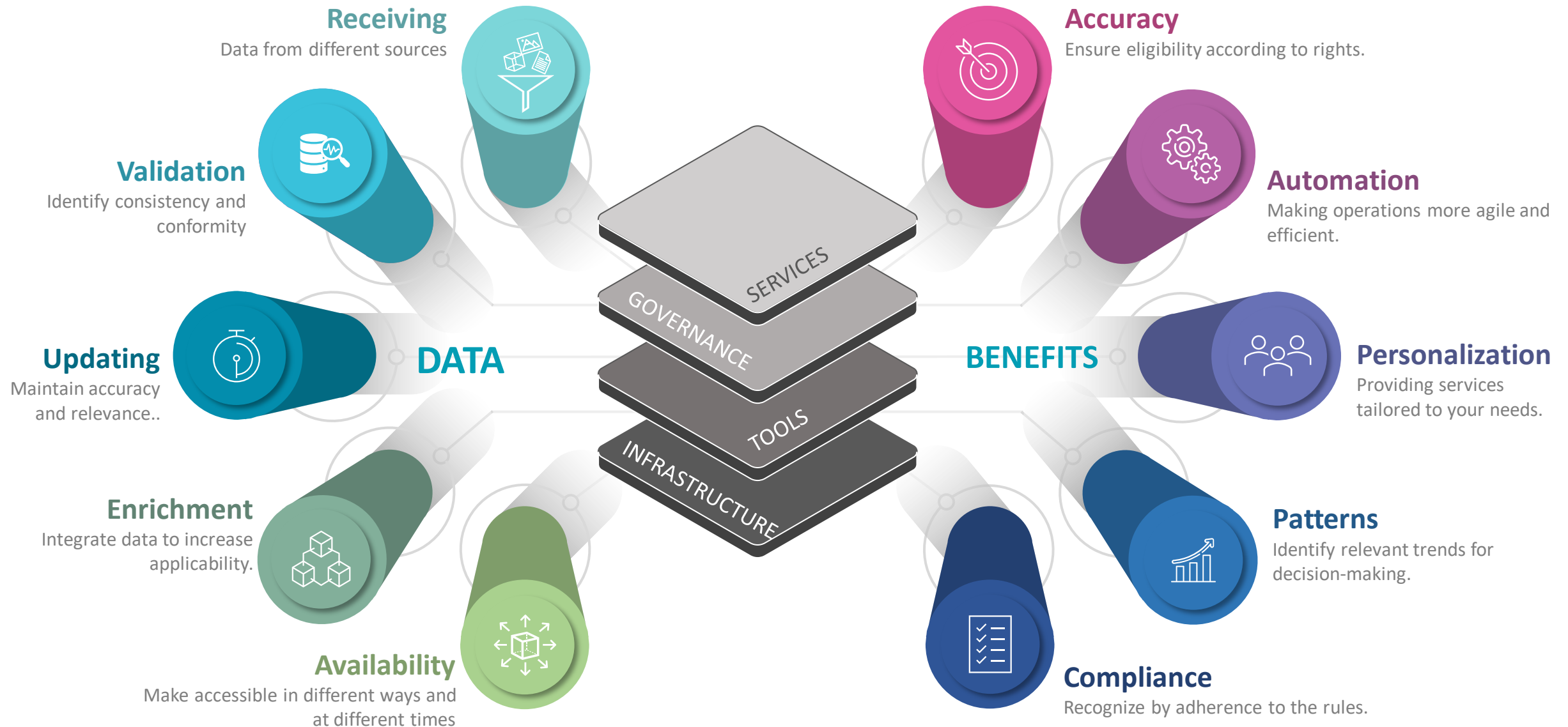
ICT

PLATFORMS

SERVICES



Data and benefits qualification program



Data and benefits qualification program

Centered on dimensions by information characteristics

Identification

- Valid and active tax number
- Consistent date of birth
- Correct mother's name
- Death registry

Address and Location

- Residential
- Work
- Informed by employer
- Self-declared in government records

Income composition

- Formal income
- Informal remuneration
- Benefit remuneration
- Wealth accumulation

Family Group

- Affiliation
- Family members
- Civil relationship
- Coexistence of members between families
- Relationship with pension

Labor Information

- Formal employment
- Informal activity
- Self-employment



Multi-cloud infrastructure in our premisses

FLEXIBILITY, SCALABILITY AND TIMELINESS

- Regular updating of service catalogs
- Complementary services
- Flexible contractual model for additional demands

INTEROPERABILITY AND REDUNDANCY

- Integrating different solutions

BUSINESS MODEL

- Solutions from various suppliers, integrated with our products, speed up solutions for our customers needs

ECONOMY AND ADVANTAGE

- Reduction of bureaucracy and administrative costs
- Maximization of financial and budgetary resources
- Aggressive commercial conditions

RELATIONSHIP WITH GOVERNMENT INITIATIVES

- National Identity Card (CIN)
- National Data Infrastructure (IND)
- Body Cameras (Public Security)
- Document Storage and Preservation (National Archives)
- Automation of Benefits Analysis and Document Validation
- Benefits Platform (Calamities)
- Payments Platform

Opportunities on Artificial Intelligence



**BUSINESS
PROCESS
ACCELERATORS**



**RISK
ANALYSIS**

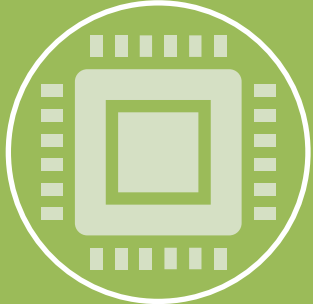


**DECISION
MAKING
AGENTS**



**BUSINESS
INSIGHTS**

Challenges on Artificial Intelligence



GPU Infrastructure

- Expensive and hard to operationalize



Transition to a Probabilistic Process

- What level of imprecision the institution is willing to accept?



Impartiality of Models

- Can a statistical model be impartial?



Human Resources

- Knowledgeable people are scarce and highly demanded by the market



Information Security

- How to avoid unwanted data access?



Models Governance

- Changes on systems governance methods



Sustainability

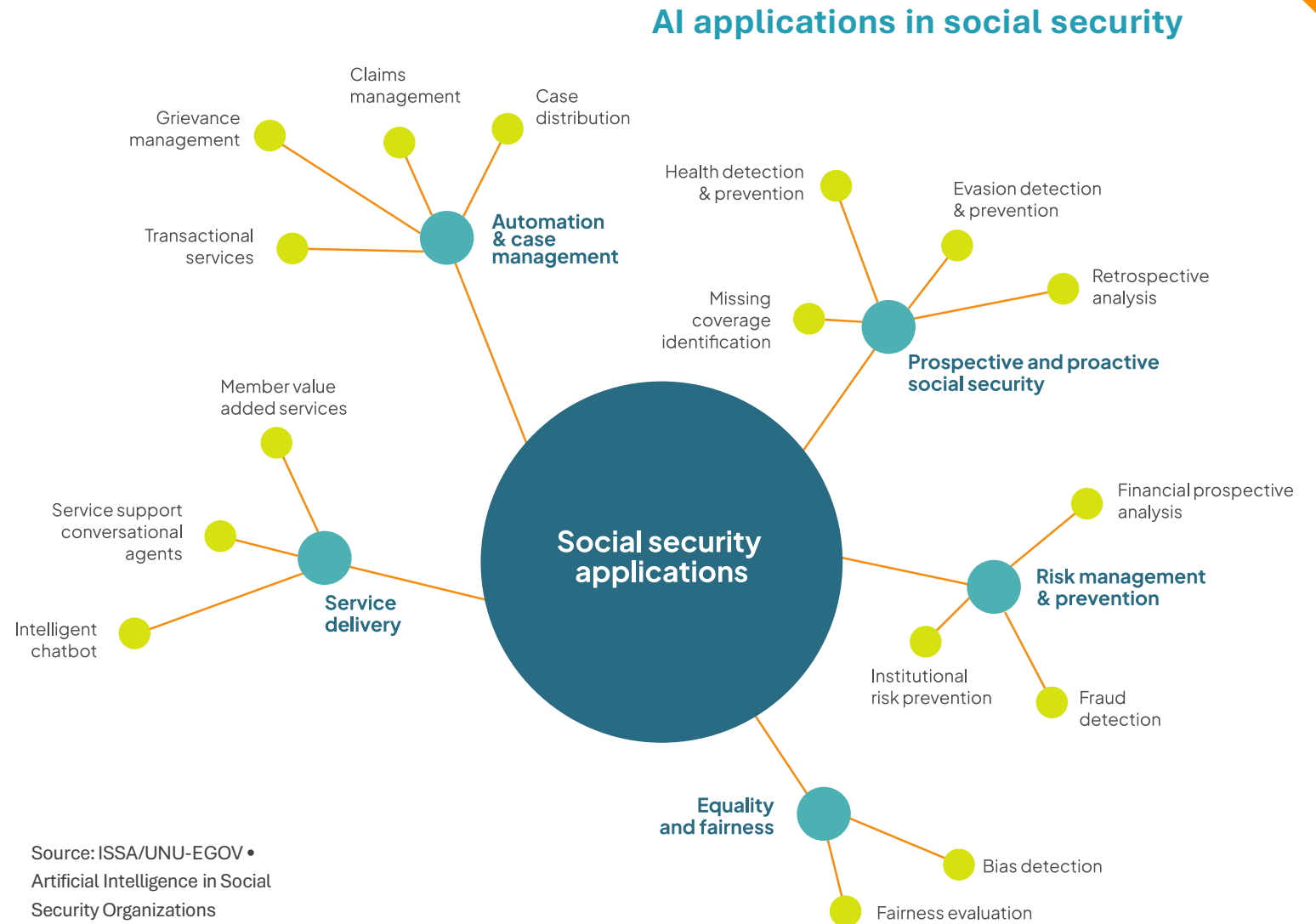
- Does AI usage results surpass costs?



AI in social security

A new report released by the International Social Security Association (ISSA) examines the growing use of AI in social security, that has accelerated over the last few years.

AI has already shown how it can significantly increase capacity in different dimensions, to improve internal operations as well as service delivery.



EmpregAI – Smart Employability

Optimize the intermediation flow and elevate workforce employability

Recommendation of companies with high potential for job positions availability



Workers unemployed



Data

IMO (Workers and job positions), eSocial (hirings and lay-offs), Deaths, CTPS Digital



EmpregAI

makes personalized recommendations



Job Position Recommendations received by worker through CTPS Digital



Selection Process with recommended workers

Qualified job position recommendations to those workers



Companies that hire the most



Data

IMO (Workers and job positions), eSocial (hirings and lay-offs), Deaths, CTPS Digital



EmpregAI

makes personalized recommendations



Potential Employer Recommendation Received by SINE Agent



Collection Process of job positions with recommended companies

61% + Companies

more active companies after the beginning of assertive recommendation

+7 Job Positions

In average per company after EmpregAI (before: 4,6)

+4 Million Workers

notified by CTPS Digital

2,6% + Jobs

Increase in efficiency on intermediation (before: 1,85%)

PROVAI – Smart *Proof of Life*

Identify the probability of a citizen being alive, qualifying the need for him to prove it.

Citizen interactions with governmental systems



ProvAI
Applies and monitors
predictive model

Citizen's score on
need for proof of life

Recommendation for
Proof of life of **citizen**

Death indicative and
Life Table

14.4M beneficiaries
analyzed with proof of life required

Need for Proof of Life
Score

Below
50%

4.36M ^{30%}
beneficiaries

50%
80%

9.94M ^{69%}
beneficiaries

Above
80%

157Mil ^{1%}
beneficiaries

Challenges on Artificial Intelligence

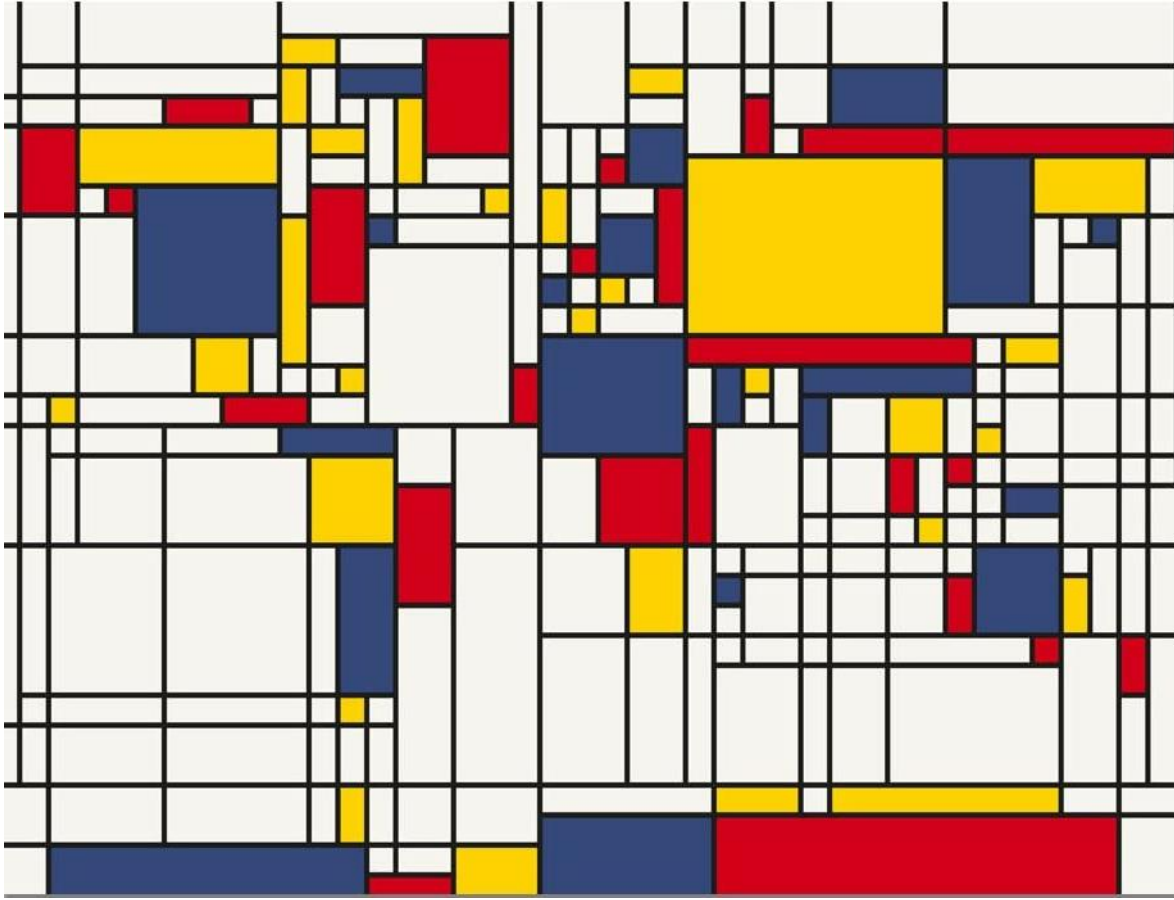


QUALIFIED DATA

AI applications are only as good as the data their models have been trained on!

Digital Transformation

How we think it should be...



How it often is...

