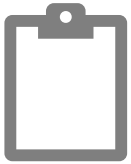# Towards a Full Integration of SDMX in the Data Value Chain – the Present and the Future of SDMX tools

Bilyana Bogdanova and Brian Buffet (BIS)
2023 SDMX Global Conference

| The survey - background

- Building upon a 2016 report on the use of SDMX by central banks by the Irving Fisher Committee (IFC).
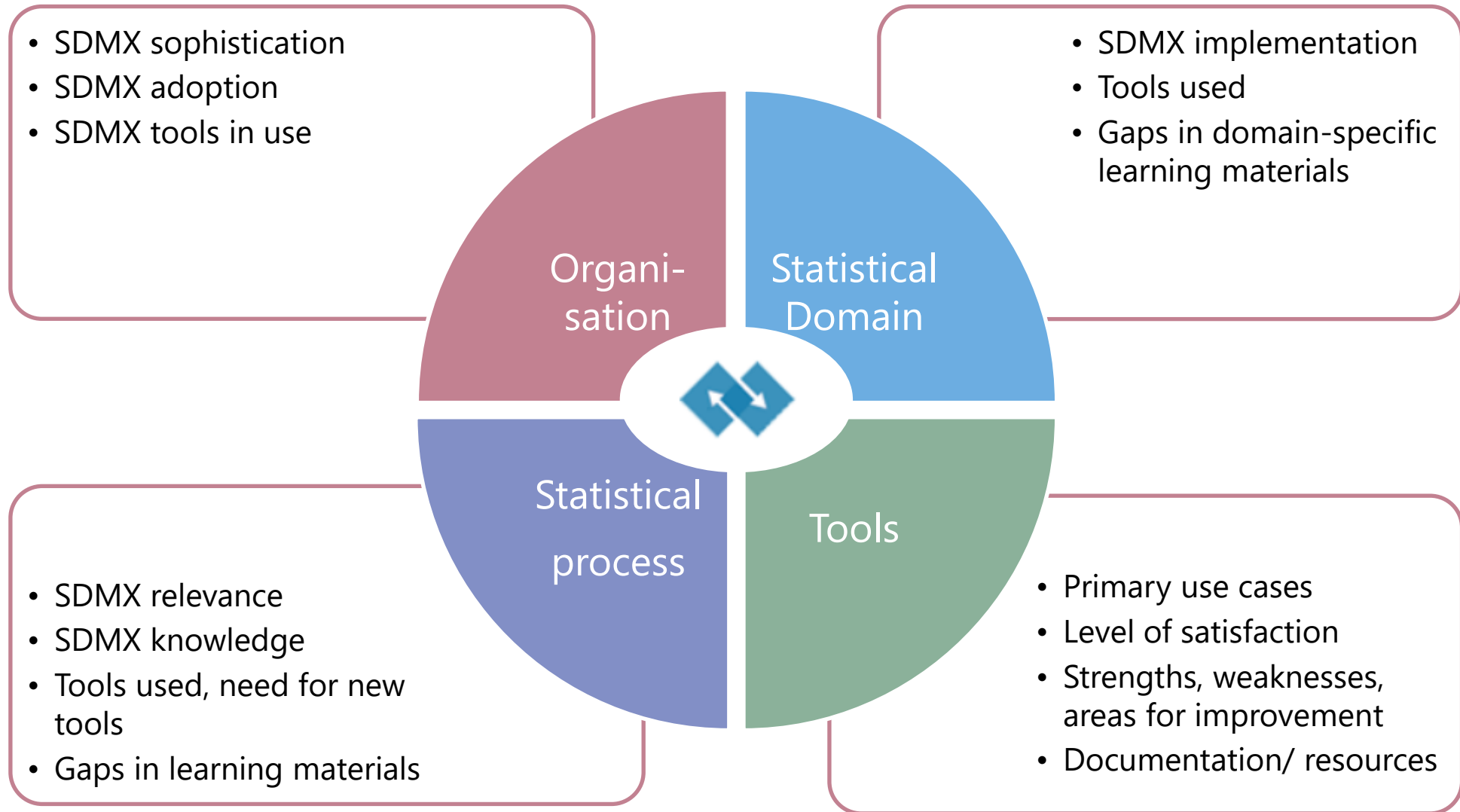- Assess the **state of SDMX adoption** and **usage of SDMX tools**

- IFC members – 97 Central Banks.*

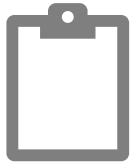- **Unit of analysis**: the Organisation (Central Bank).

- Questionnaire was developed by a working group (7 organisations)

- Survey ran from March – August 2023
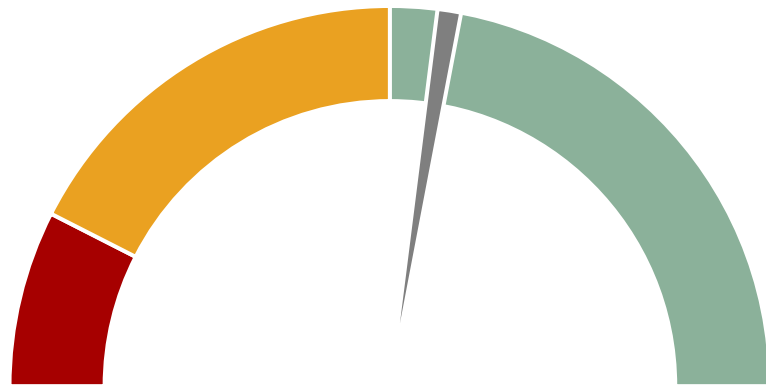
| The survey – 4 focus areas

- SDMX sophistication
- SDMX adoption
- SDMX tools in use

- SDMX implementation
- Tools used
- Gaps in domain-specific learning materials

Organi-sation

Statistical Domain

Statistical process

Tools

- SDMX relevance
- SDMX knowledge
- Tools used, need for new tools
- Gaps in learning materials

- Primary use cases
- Level of satisfaction
- Strengths, weaknesses, areas for improvement
- Documentation/ resources

# | The survey – key takeaways: the Present

- SDMX adoption and relevance
  - **~80%** of respondent central banks are **using or implementing SDMX**
  - *Need to adapt internal tools* and *Lack of resource* are **key barriers to SDMX adoption**
  - **SDMX 2.1** is the predominantly used version of the standard
  - Along the **statistical value chain**, SDMX **most relevant** for *Reporting to other institutions* and *Data Production*
- SDMX tools
  - Overall **satisfaction** is **good**
  - **Open-source tools and libraries** are the **most used**.
  - There is a **vast range of tools in use, but** many by only a few respondents
  - The **main barrier** to using **open-source tools** is **cyber security**

| The survey – response rate
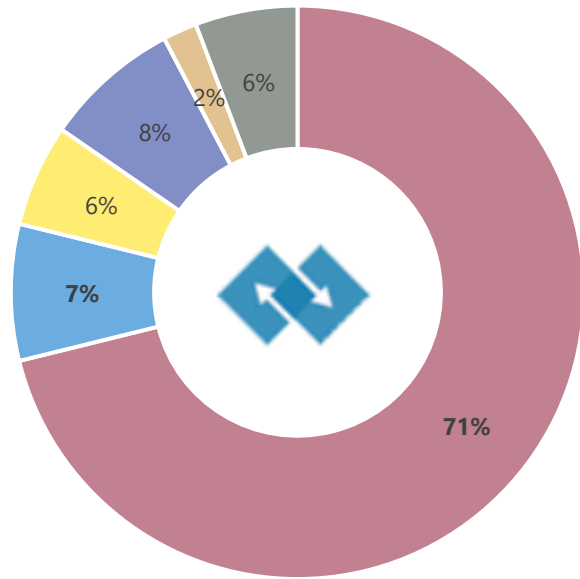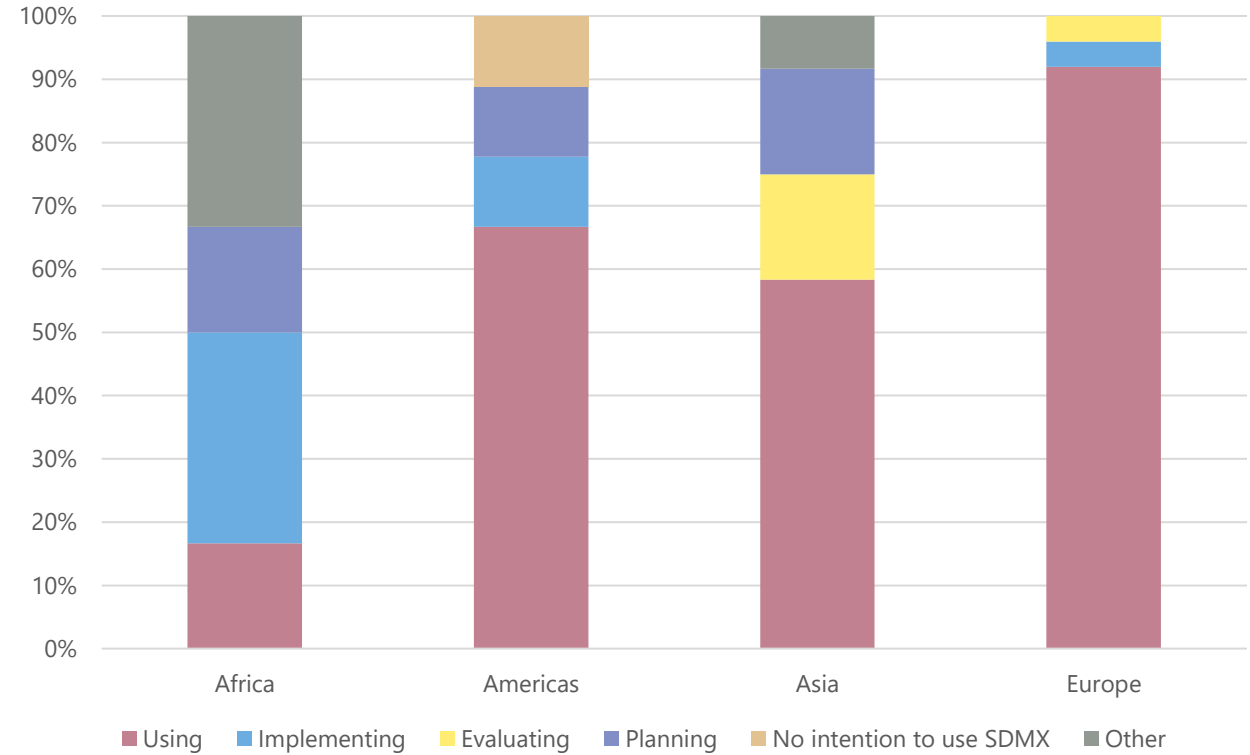

Very good response rate = 54%

	Respondents	Non-Respondents
Europe	26	14
Asia	12	15
Africa	6	3
Americas	9	10
Oceania	0	2
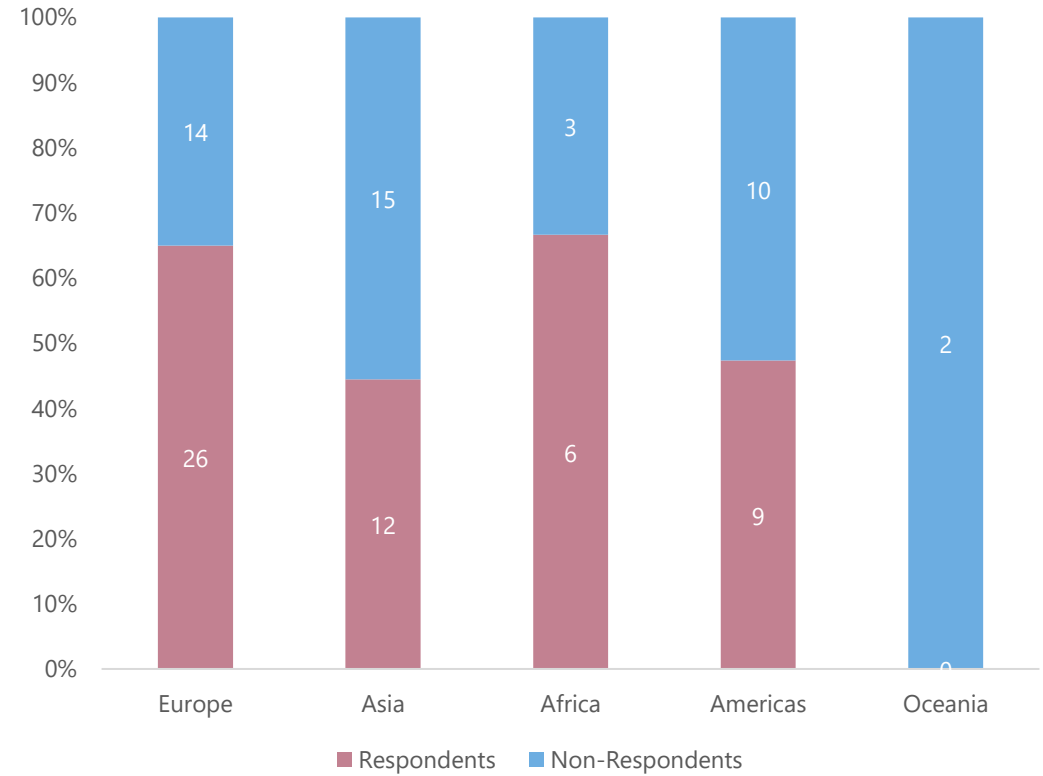
Initial Findings

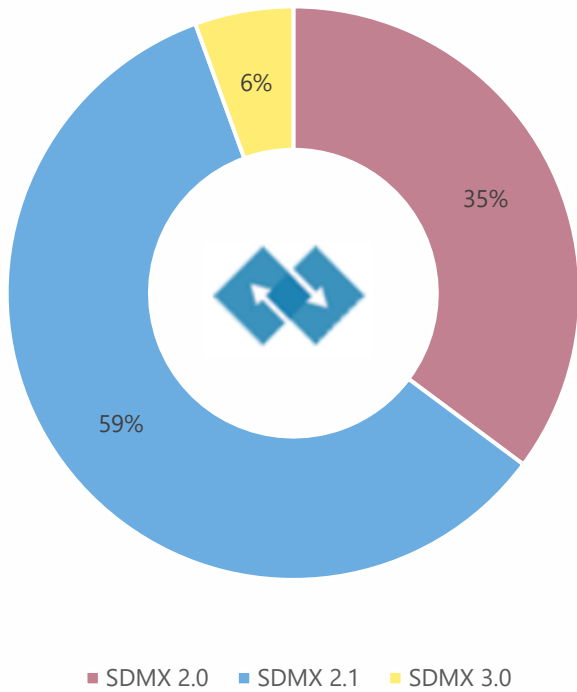*Preliminary results of the 2023 IFC survey*
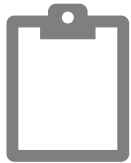
| The survey – SDMX usage

Donut chart legend: Using, Implementing, Evaluating, Planning, No intention to use SDMX, Other

Values: 71%, 7%, 6%, 8%, 2%, 6%

Bar chart by region: Africa, Americas, Asia, Europe

Legend: Using, Implementing, Evaluating, Planning, No intention to use SDMX, Other
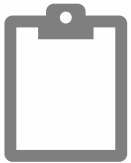
| The survey – SDMX versions and SDMX 3.0 migration plans

Donut chart:
- SDMX 2.0: 35%
- SDMX 2.1: 59%
- SDMX 3.0: 6%

■ SDMX 2.0 ■ SDMX 2.1 ■ SDMX 3.0

Stacked bar chart:

	Planning within 2 years	Planning in 3+ years	No plans to use
Americas	2	1	3
Asia	2	2	3
Europe	6	8	8
Africa		1	

■ Americas ■ Asia ■ Europe ■ Africa

BIS
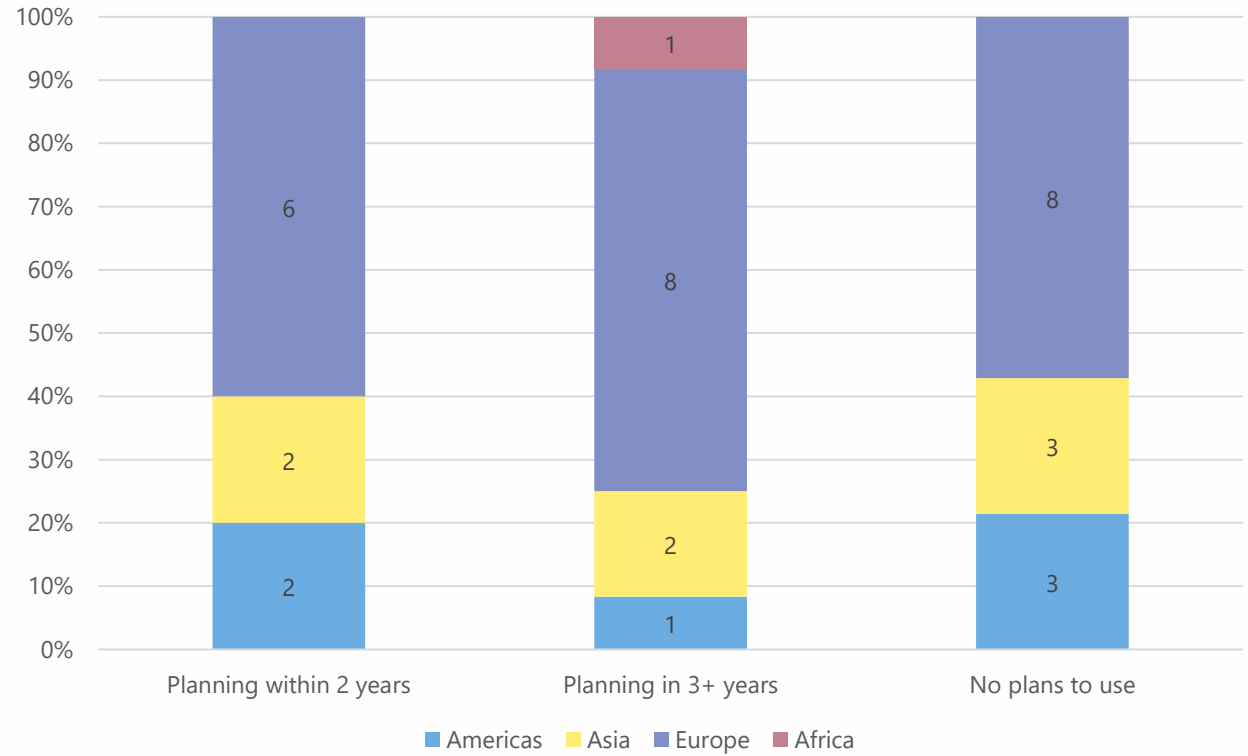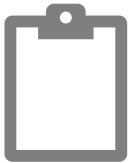
| The survey – Not using SDMX. Why?

Chart categories (vertical axis, top to bottom):
- Lack of SDMX learning materials
- Lack of support for SDMX in commercial tools
- Lack of support for SDMX in open-source tools
- Other
- Lack of resources
- Need to adapt internal tools to support SDMX

Horizontal axis: 0, 2, 4, 6, 8, 10, 12

Legend: Africa, Americas, Asia, Europe
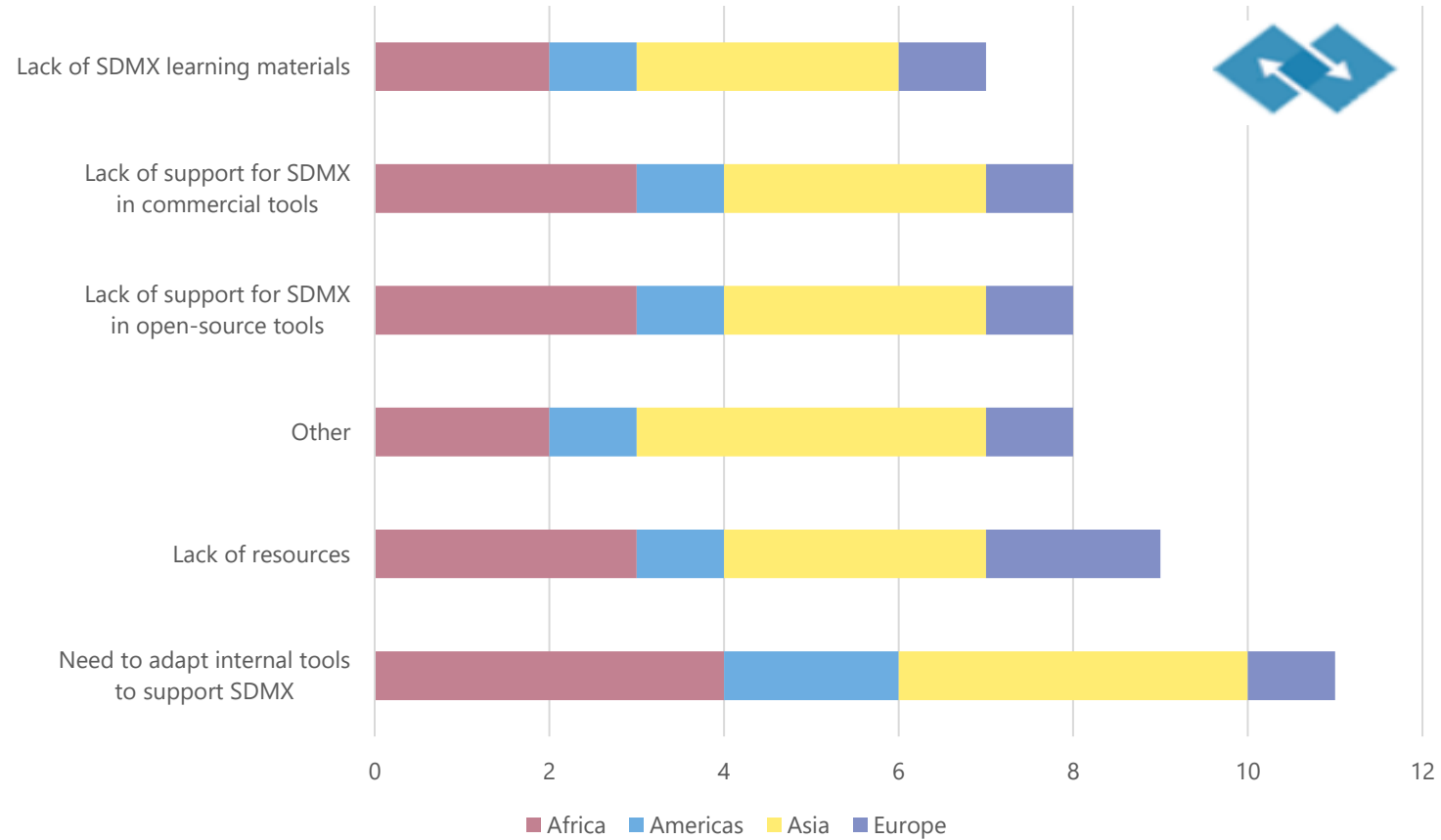
| The survey – Barriers to SDMX 3.0 adoption

Lack of support for SDMX 3.0 in open-source tools	
Lack of SDMX 3.0 learning materials	
Lack of SDMX 3.0 implementation reference materials	
Need to adapt internal tools	
No business case to migrate	
Lack of resources	

■ Africa ■ Americas ■ Asia ■ Europe

| The survey – SDMX Relevance vs Knowledge

	😀	🙂	😐	🙁	😣
😀	20	20	7	13	1
🙂	3	34	22	7	
😐		8	18	3	3
🙁		4	3	6	3
😣	2		9	6	14

Relevance
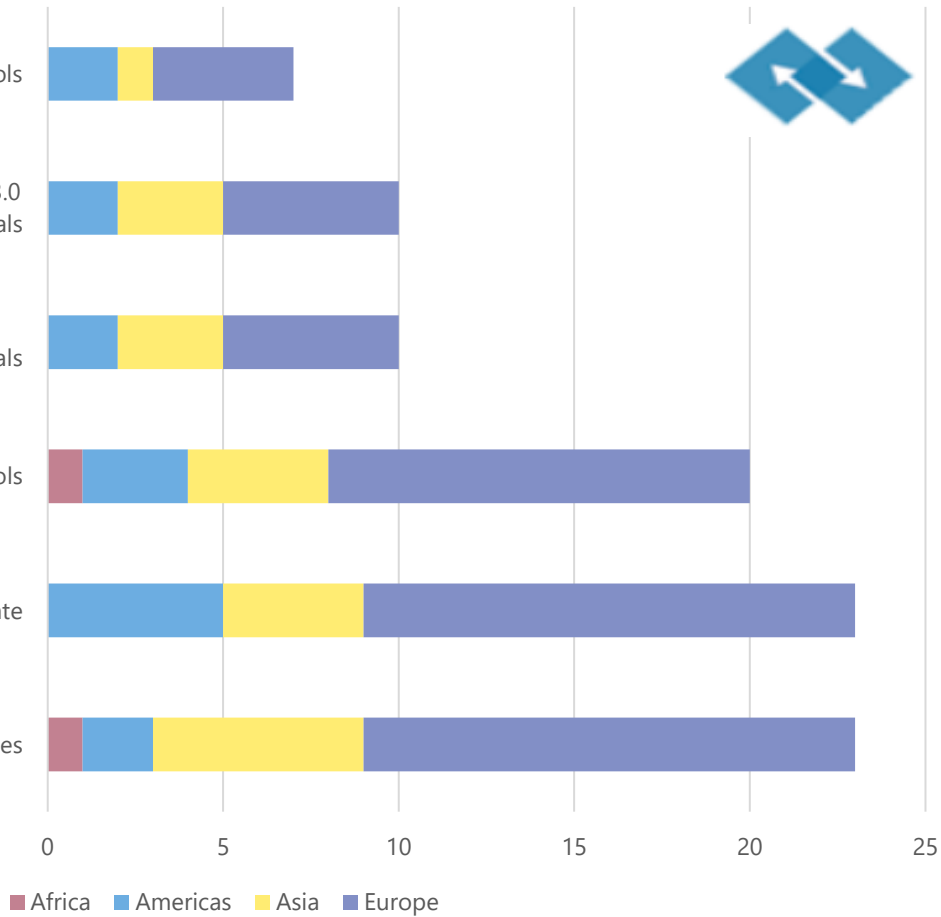
Knowledge

| The survey – **SDMX Relevance** vs Knowledge

Relevance

	😀	🙂	😐	🙁	😣
😀	20	20	7	13	1
🙂	3	34	22	7	
😐		8	18	3	3
🙁		4	3	6	3
😣	2		9	6	14

Knowledge

| The survey – SDMX Relevance vs Knowledge

	🙂	🙂	😐	🙁	😣
🙂	20	20	7	13	1
🙂	3	34	22	7	
😐		8	18	3	3
🙁		4	3	6	3
😣	2		9	6	14

Knowledge gap

Relevance

Knowledge

| The survey – SDMX relevance in the statistical value chain
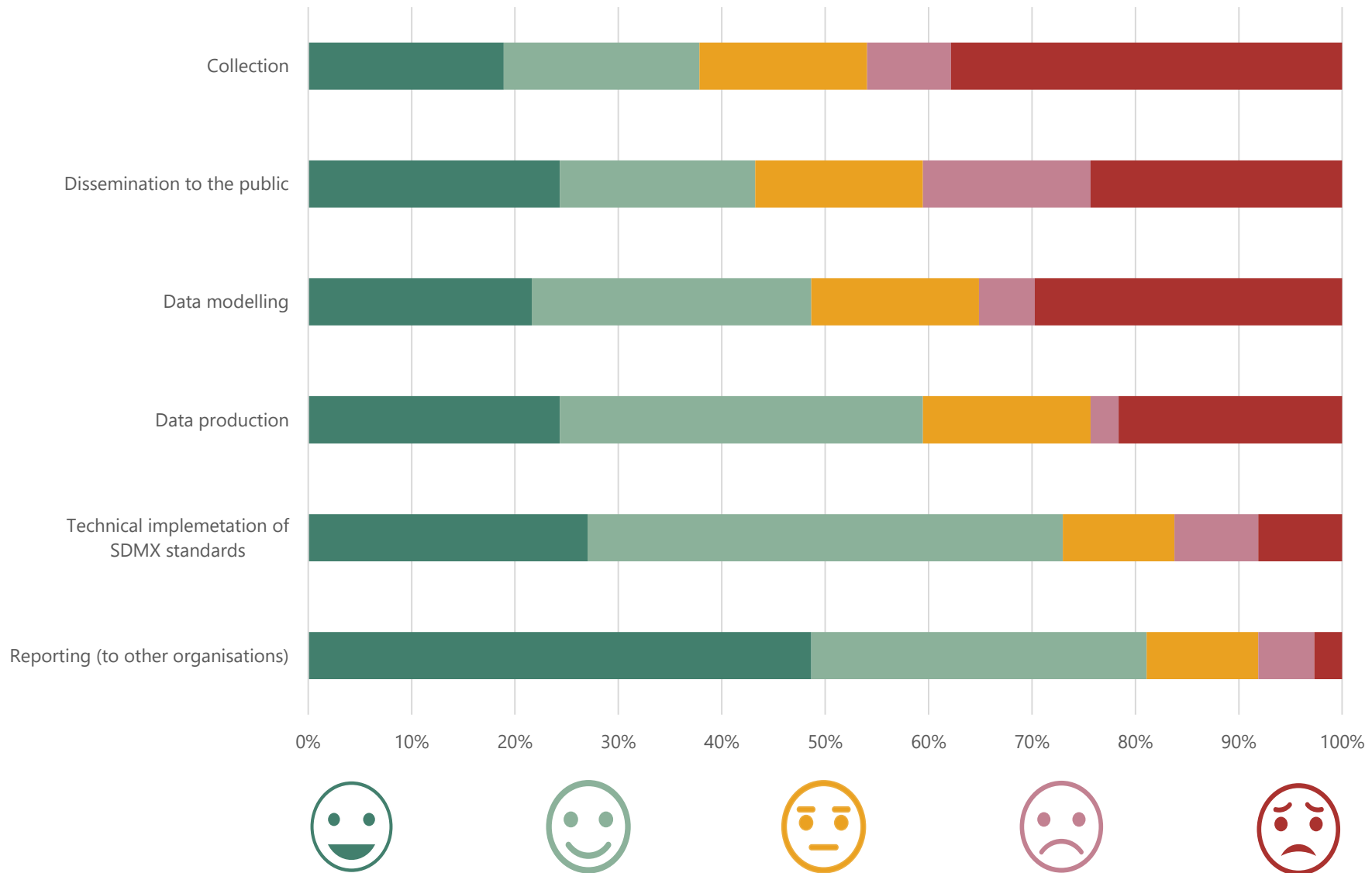
| The survey – Overall satisfaction with SDMX tools
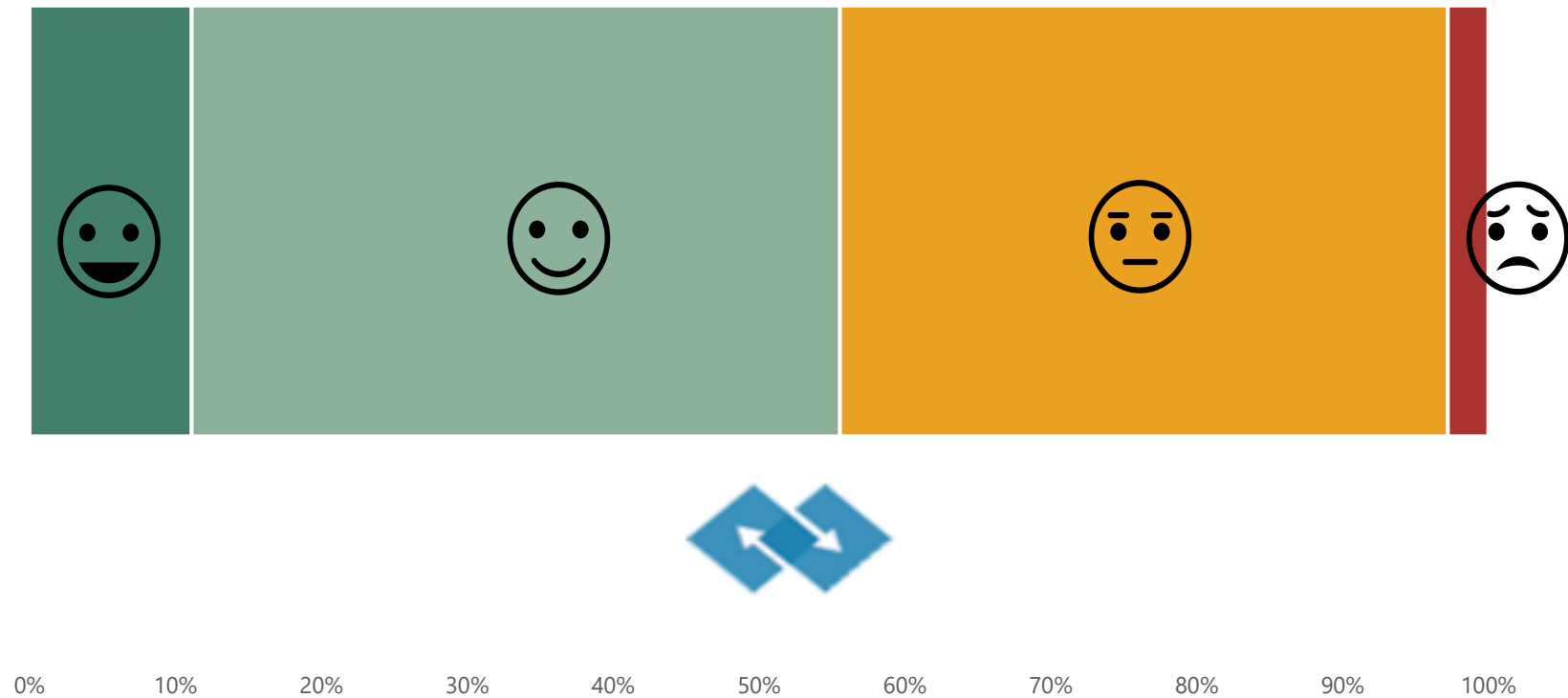

0%   10%   20%   30%   40%   50%   60%   70%   80%   90%   100%
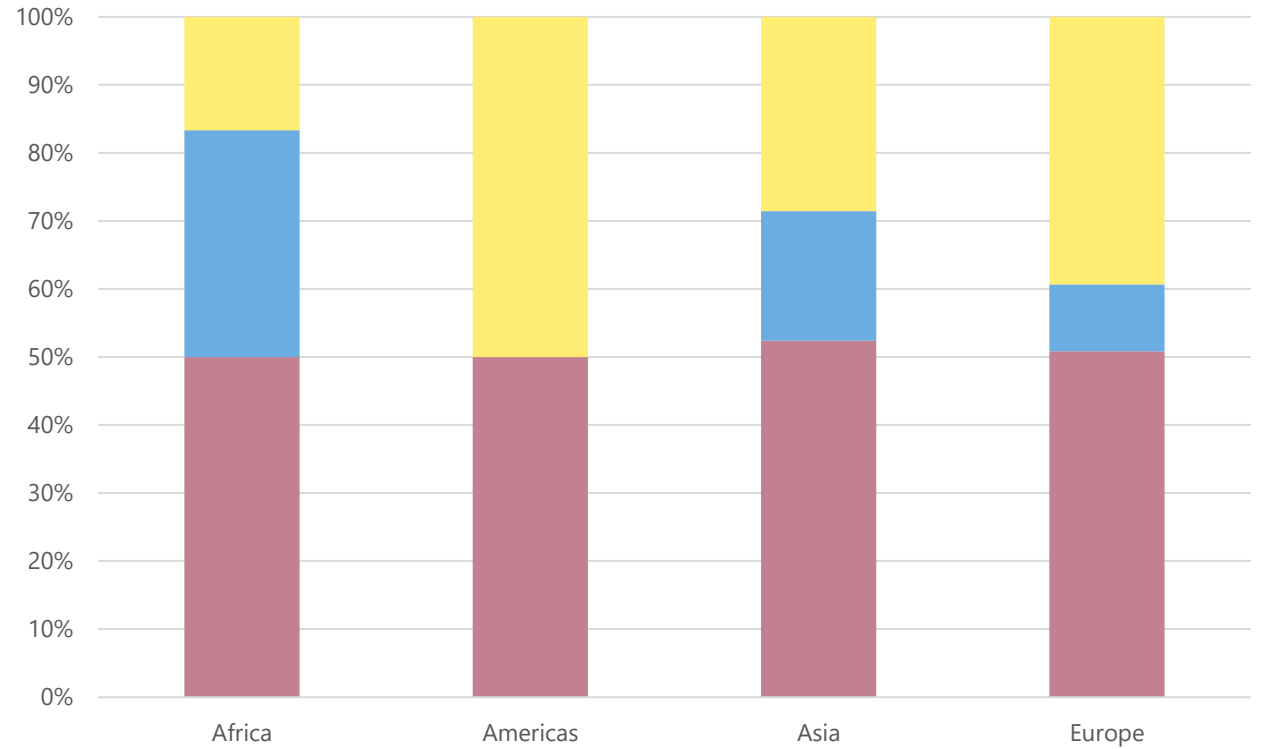
| The survey – SDMX tools, by type
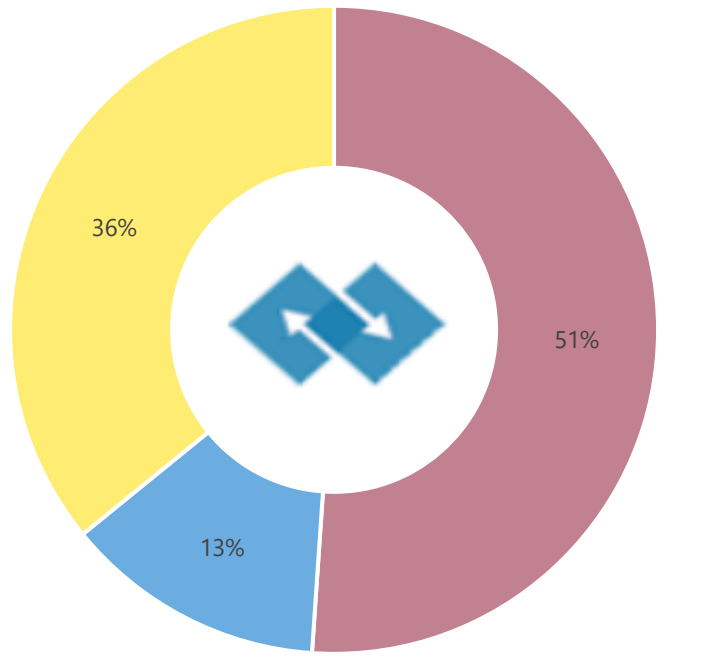
Donut chart:
- Open-source tools or open source library: 51%
- Commercial tool: 13%
- Inhouse or other: 36%

Legend:
- Open-source tools or open source library
- Commercial tool
- Inhouse or other

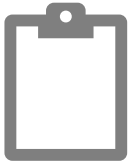Stacked bar chart by region (Africa, Americas, Asia, Europe):

Legend:
- Open-source tools or open source library
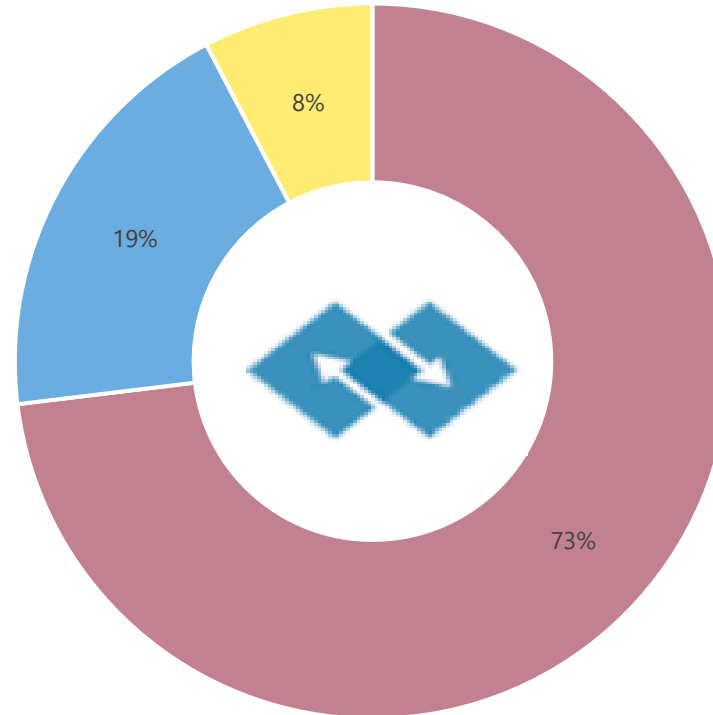- Commercial tool
- Inhouse or other

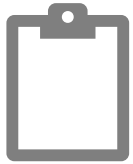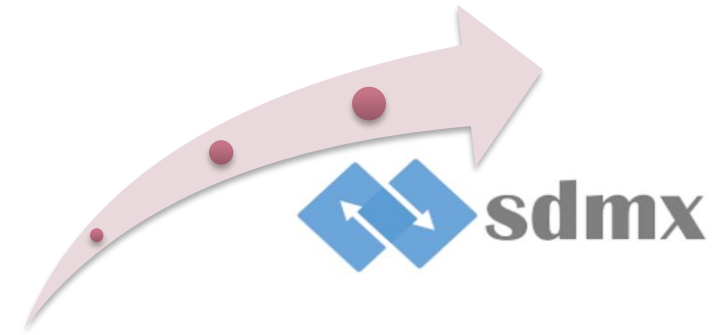# | The survey – open-source and commercial tools
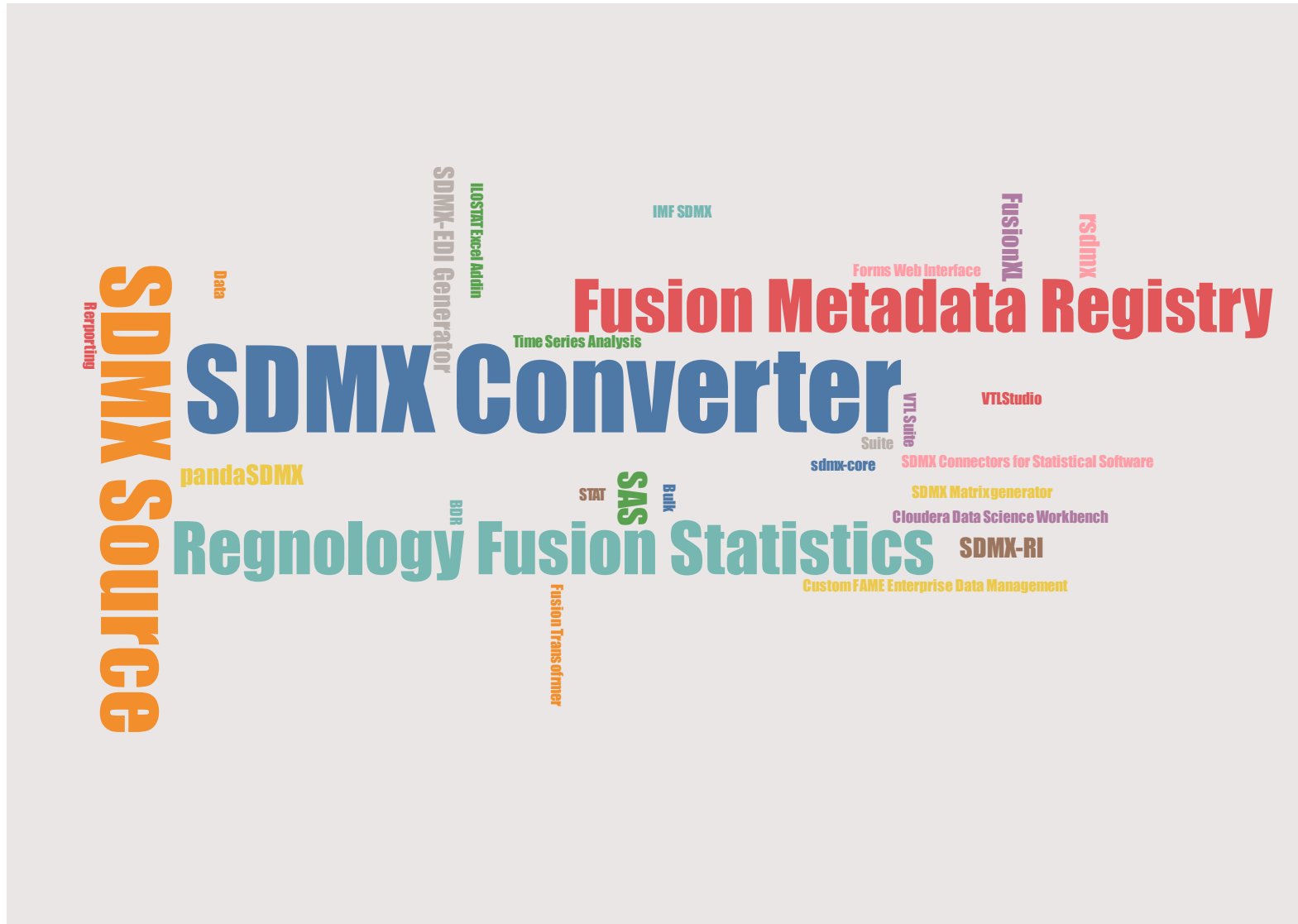
| The survey – Barriers to using open-source tools

- Cyber security must approve use of open-source tools
  or open source library
- Policies require that in order to use an open-source tool, the source code must be provided

- Polices forbid the use of open-source tools

| The survey – key takeaways for the future

- SDMX adoption and relevance
  - **13%** of respondent central banks are **evaluating or planning to implement SDMX**
  - There is a **knowledge gap.** Learning initiatives to **close this gap** are **essential**!

- Empower the data community through
  - Tools are not keeping up with the standard. Lack of support for SDMX 3.0.
  - Address **barriers to adoption and use of open-source tools**
  - Continued strong **cooperation** and **collaboration** to support SDMX in tools through the full value chain

Thank You