ACROSS AHEAD

Modeling Language Survey Report

– July / August 2025 –

> 26 January 2026 | Version 1.0

Preface

This report contains the results of a modeling language survey run by ACROSS & AHEAD in collaboration with the University of Stuttgart **between 15 July and 06 August 2025**.

It represents the information and experiences shared by **97 respondents** from around the world who completed the survey on behalf of their organizations. Further details about the organizations represented in the data set can be found in Section 1 of this report.

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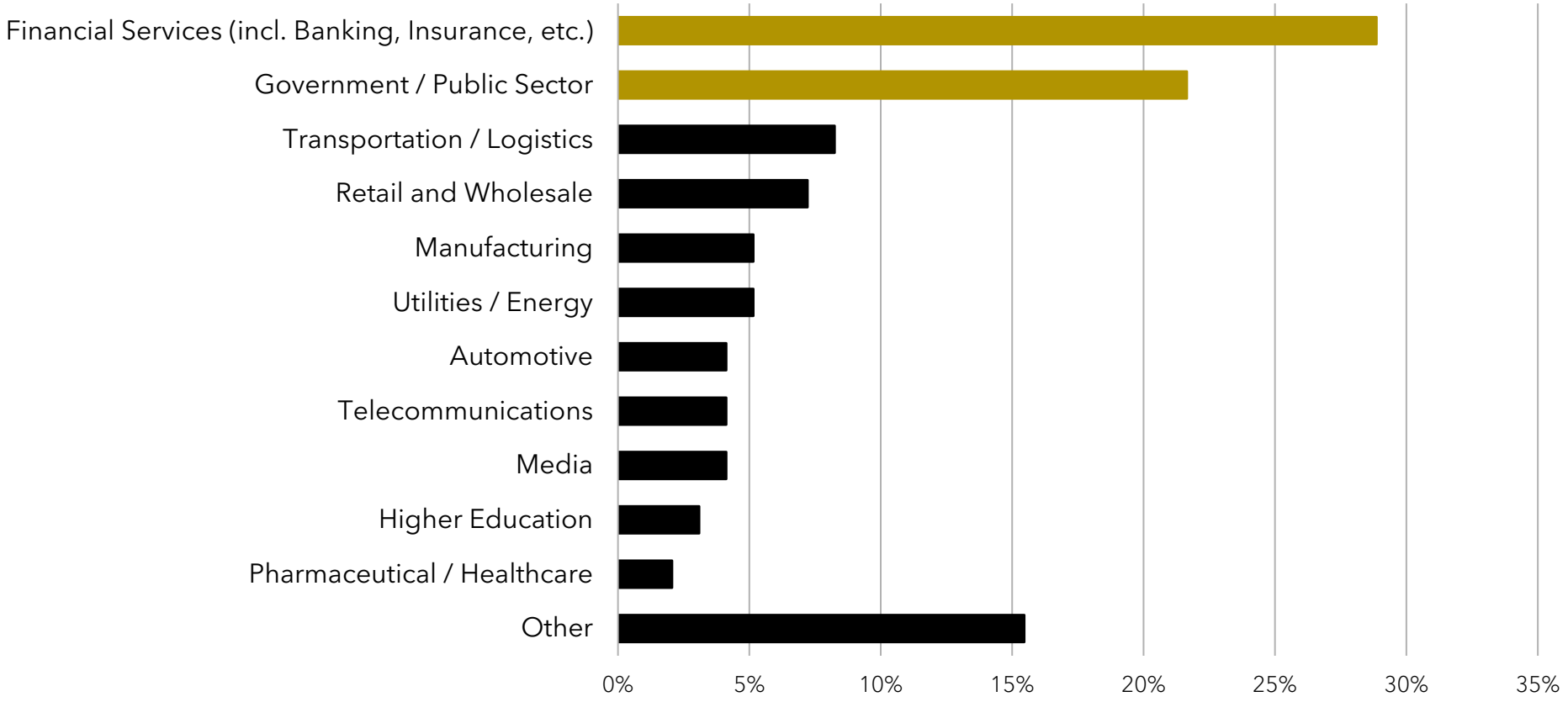
1. **Organizational Background**
2. Individual Role & Modeling Experience
3. Modeling Language Use
4. Modeling Language Combination

1.1 – Industry Affiliation

What industry does your organization belong to?

– multiple choices possible –



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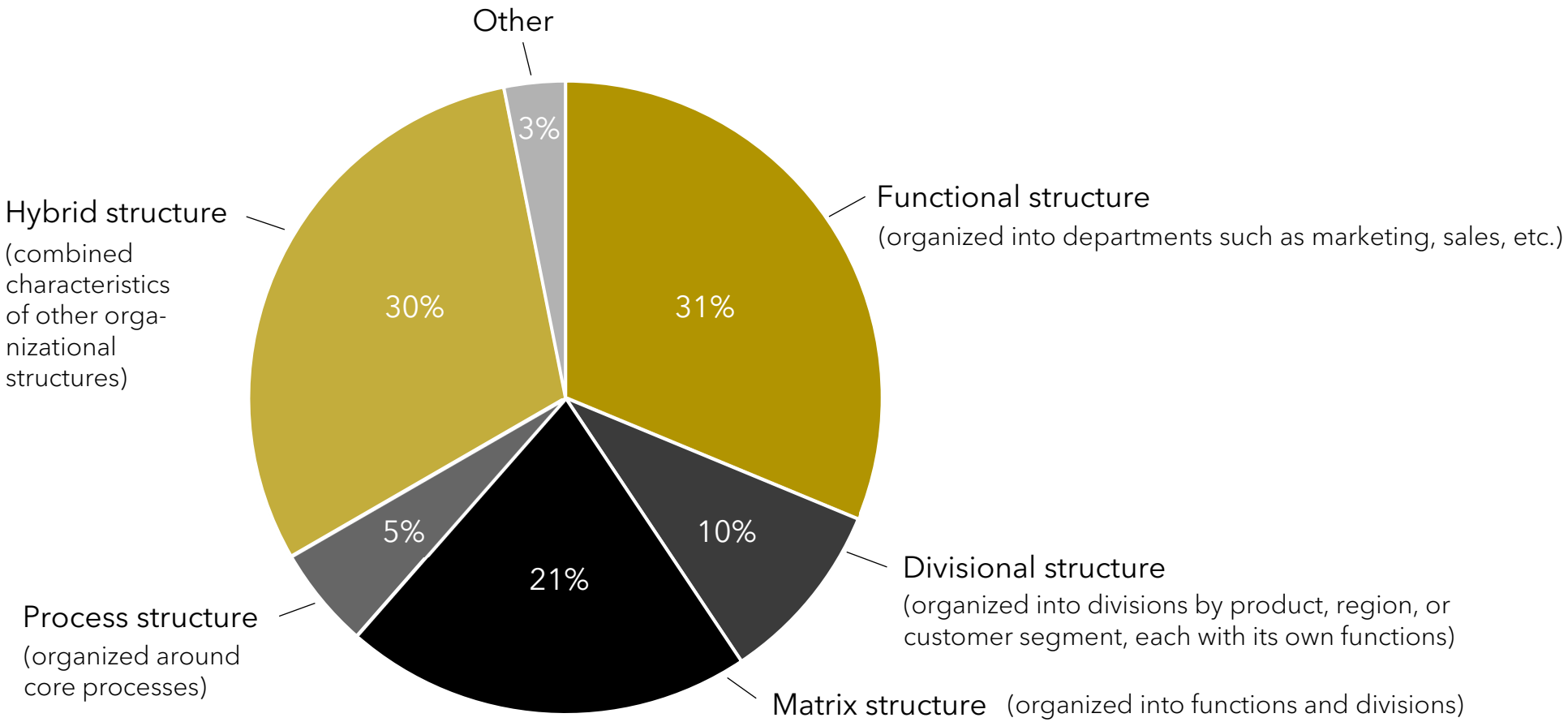
What does the structure of your organization look like?



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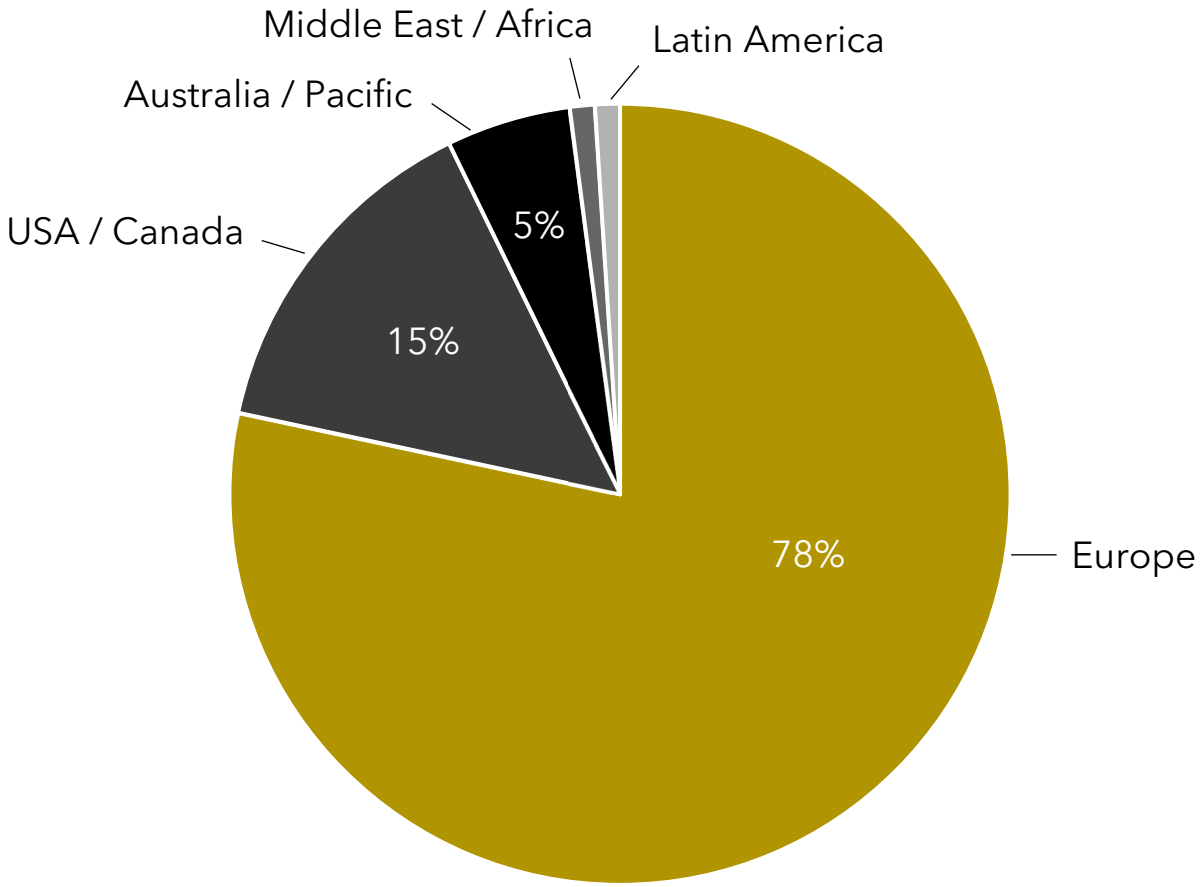
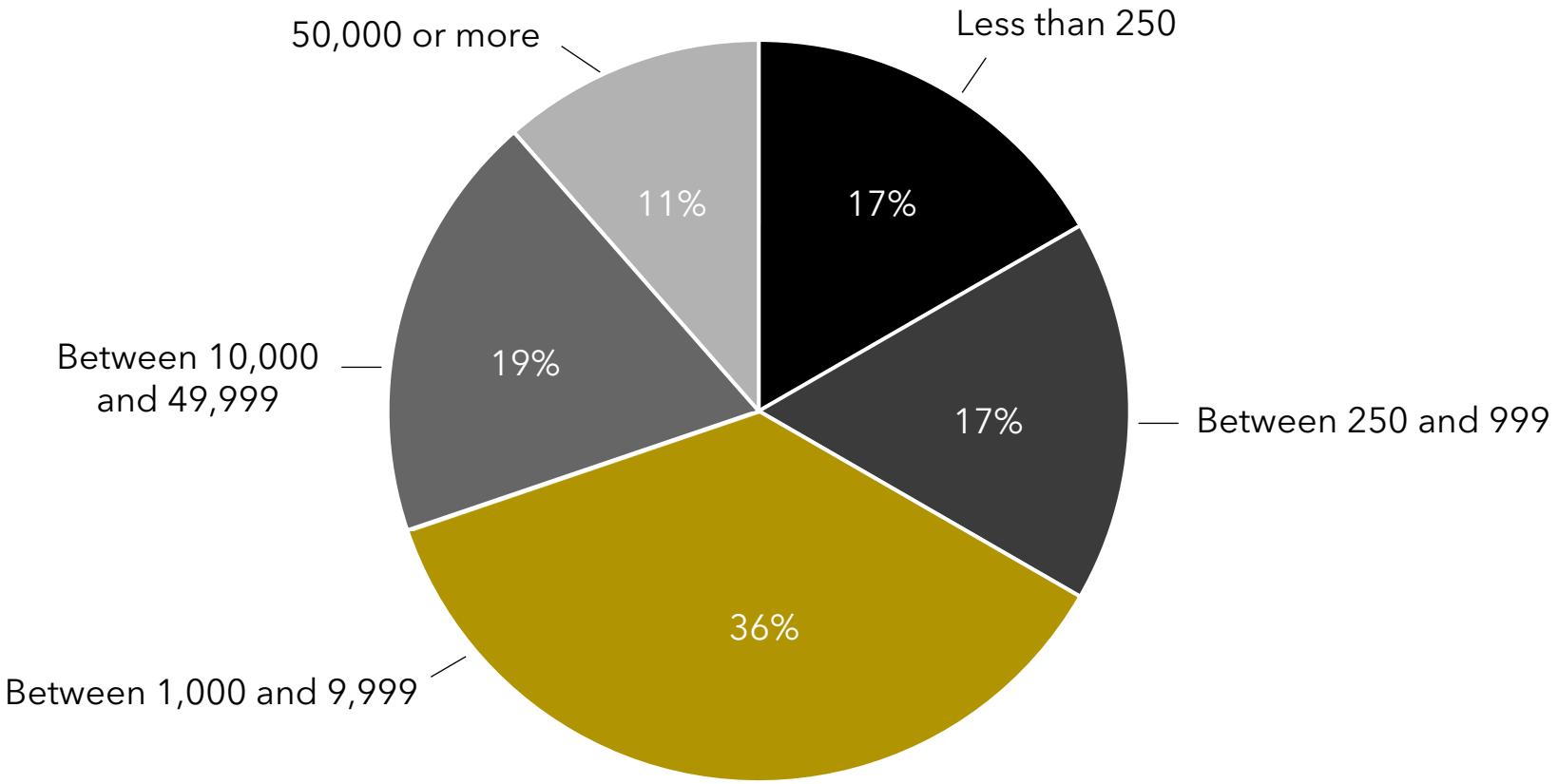
Where is your organization's headquarters located?



1.4 – Organizational Size

How many employees does your organization have?



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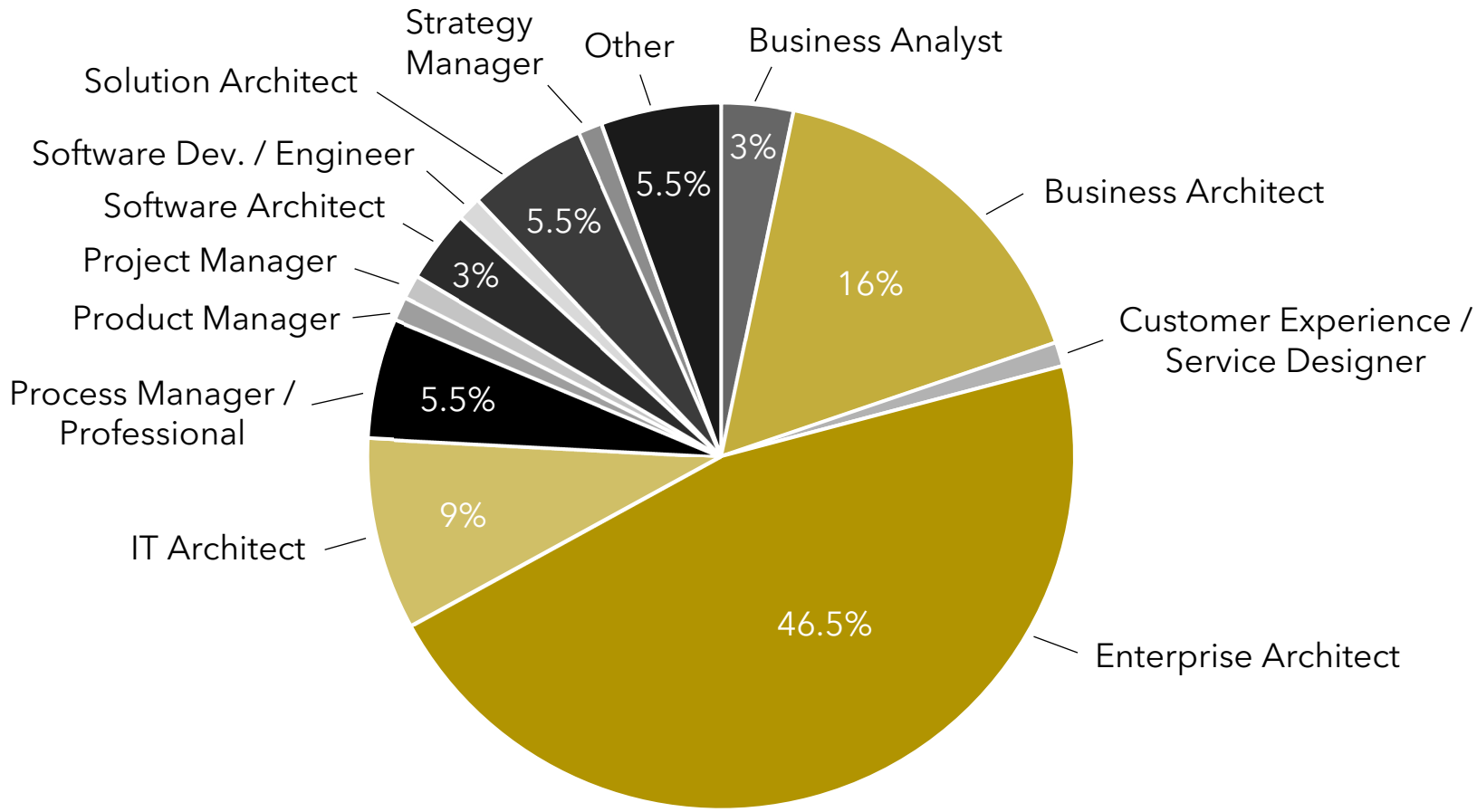
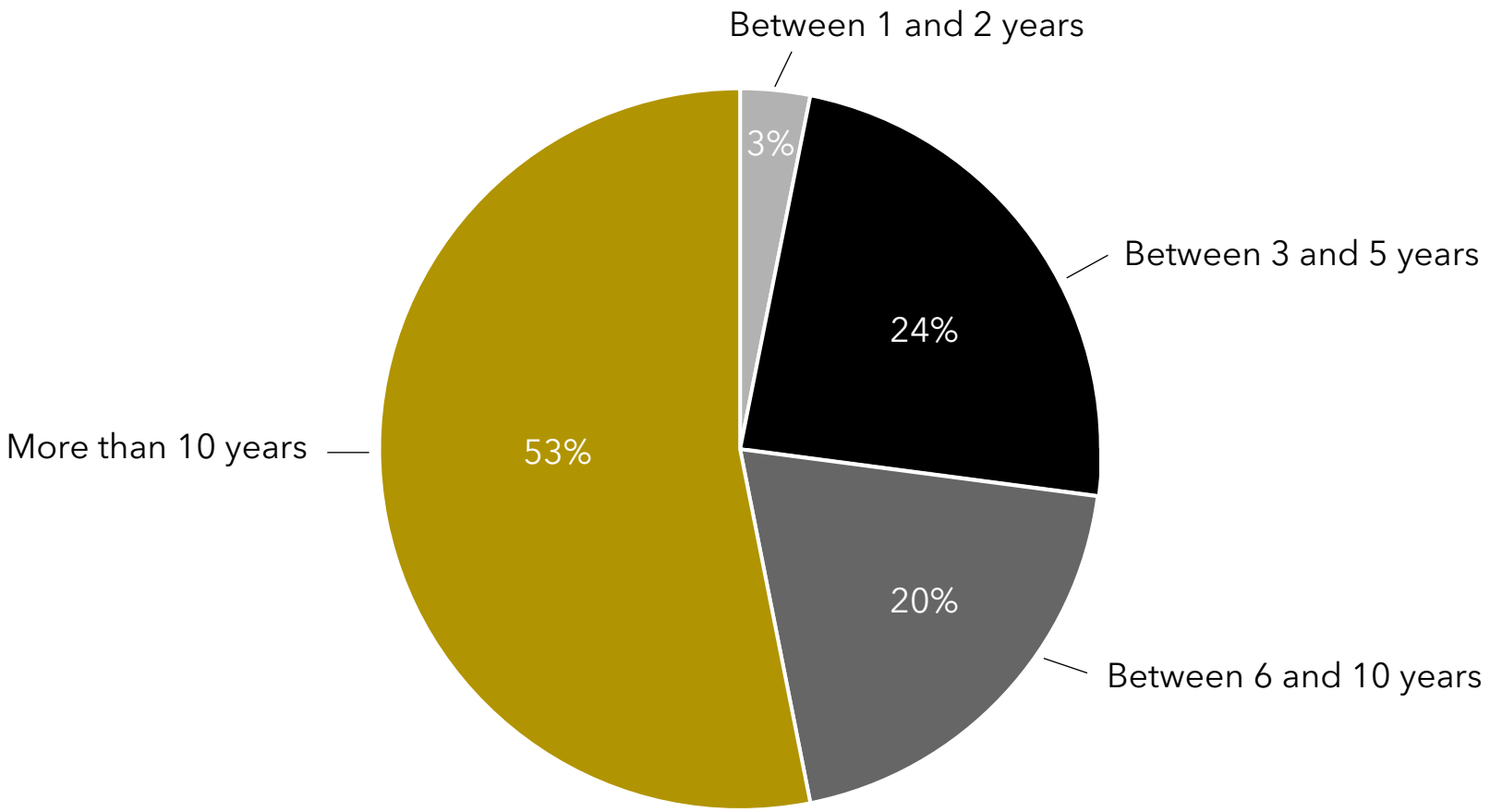
1. Organizational Background
2. **Individual Role & Modeling Experience**
3. Modeling Language Use
4. Modeling Language Combination

What is your current role in the organization?



2.2 – Years of Modeling Experience

How many years of professional experience do you have in modeling enterprises or parts of it?



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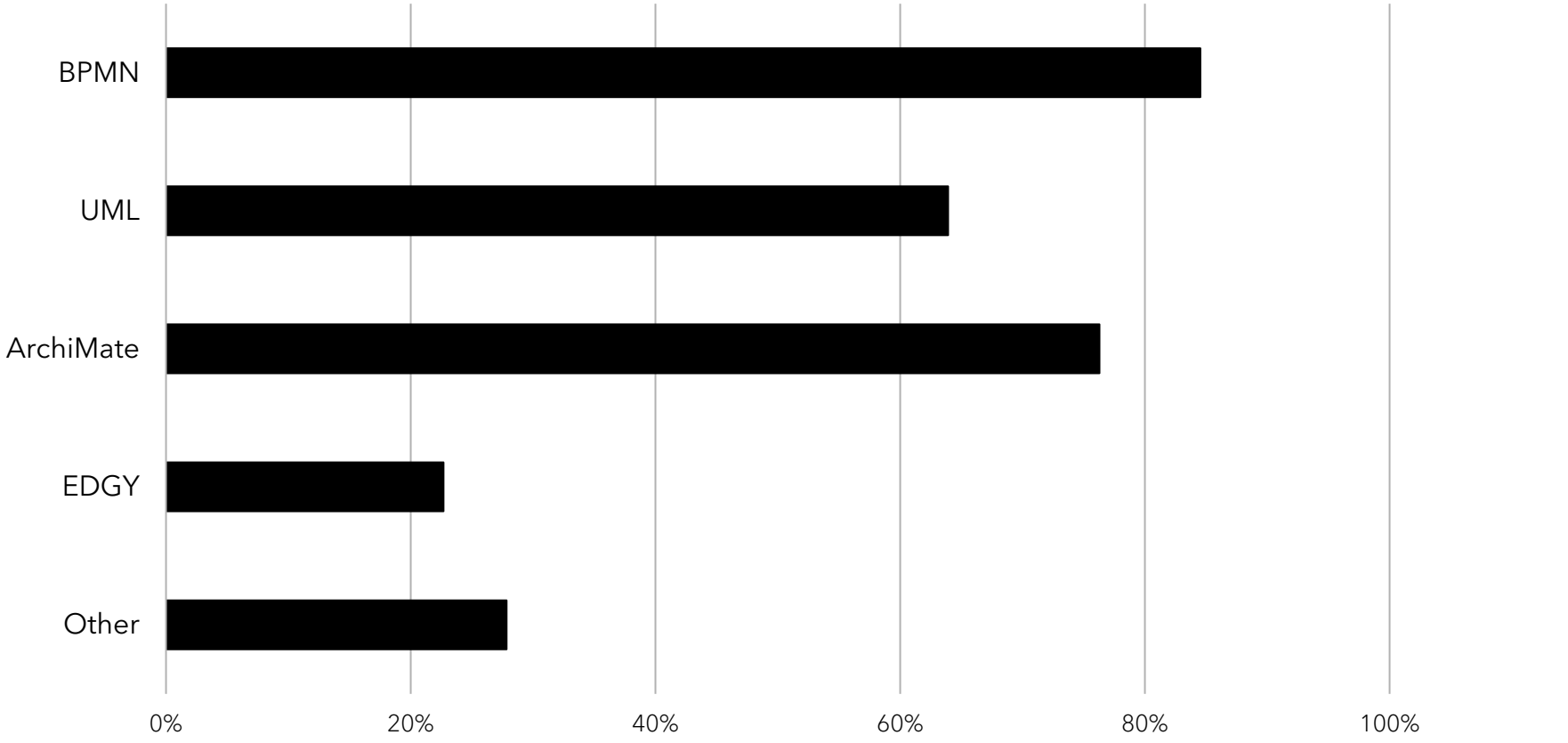
Which languages have you applied as a modeler to create maps, diagrams, or other visual representations?

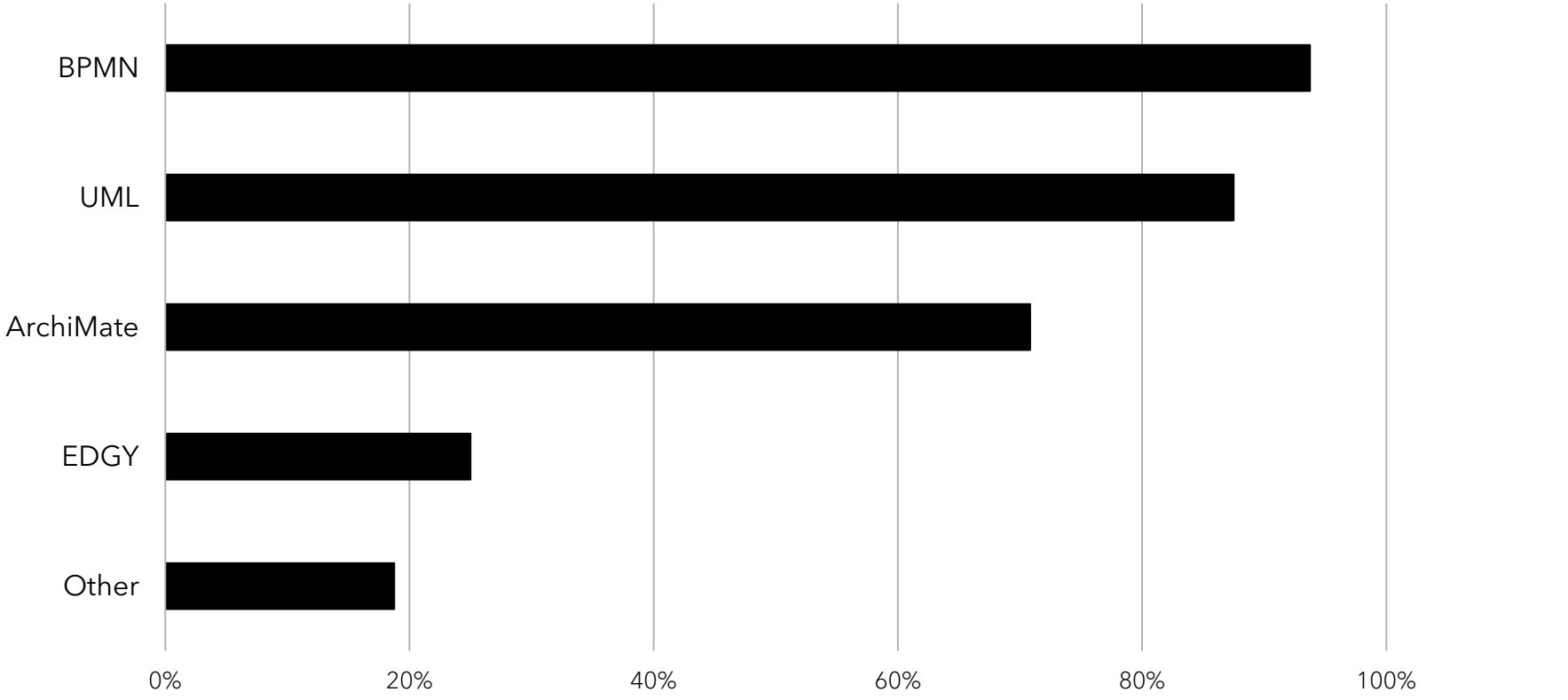
– multiple choices possible –



2.4 – Experience as Model Consumer

With which modeling languages have you come into contact as a <u>consumer</u> of certain maps, diagrams, or other visual representations?

– multiple choices possible –



Summary: Findings and Key Insights

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- Most survey respondents (nearly 80%) hold architectural roles, with almost half of the respondents being Enterprise Architects. It underlines the relevance of modeling to architectural work.
- Almost all survey respondents have multiple years of modeling experience (73% with experience of more than 5 years). This indicates high quality and reliability of the data gathered through the survey.
- Nearly 90% of the respondents have experience as a modeler with at least two languages, and more than 50% with even three languages. It therefore seems common that many practitioners (have to) deal with various modeling languages.
- Among the respondents, there is very widespread experience with BPMN. In fact, more than 90% of respondents have at least consumed certain BPMN representations. Many respondents also have experience with UML and / or ArchiMate, whether as a modeler or consumer of representations in those languages.
- Given its relatively young age, EDGY seems to have already gained remarkable traction in practice (more than 20% of respondents have either created or consumed visual representations in EDGY).

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1. Organizational Background
2. Individual Role & Modeling Experience
3. **Modeling Language Use**
4. Modeling Language Combination

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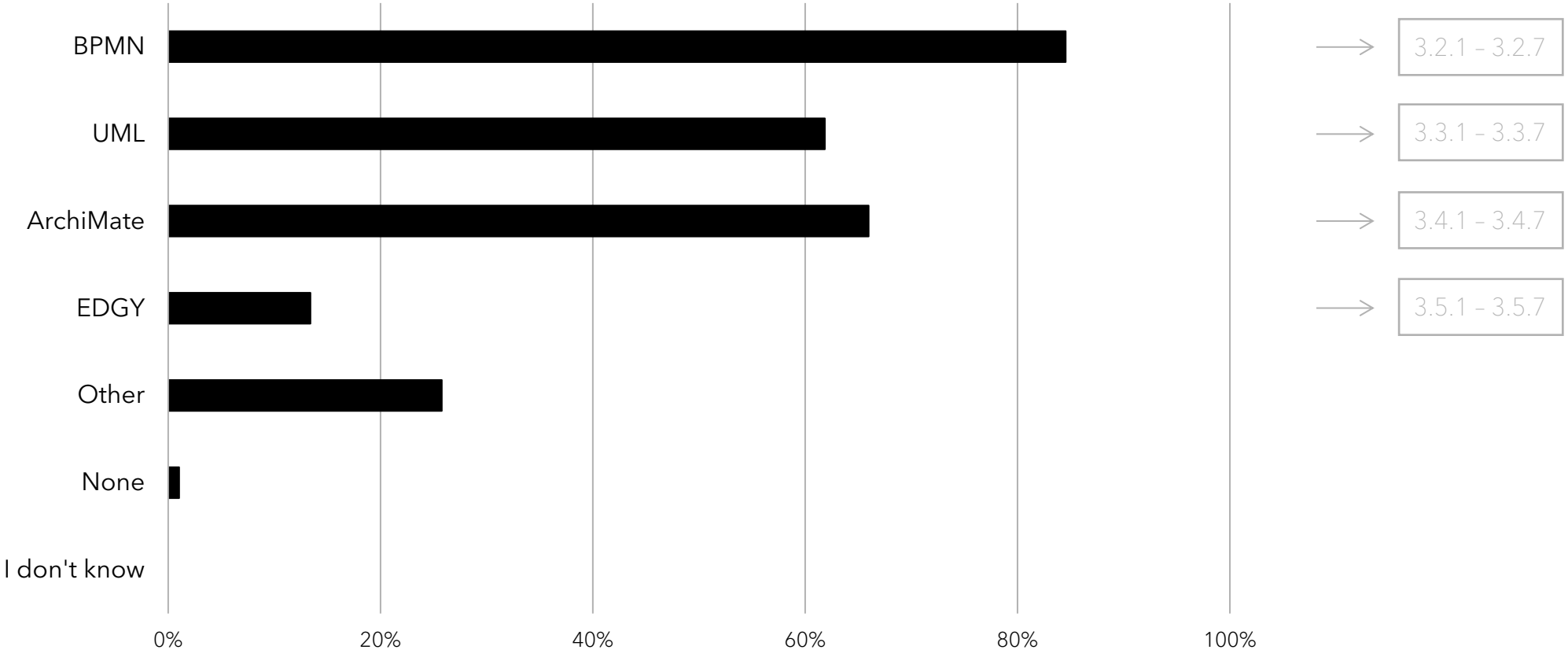
As per your knowledge, which modeling languages are used in your organization?

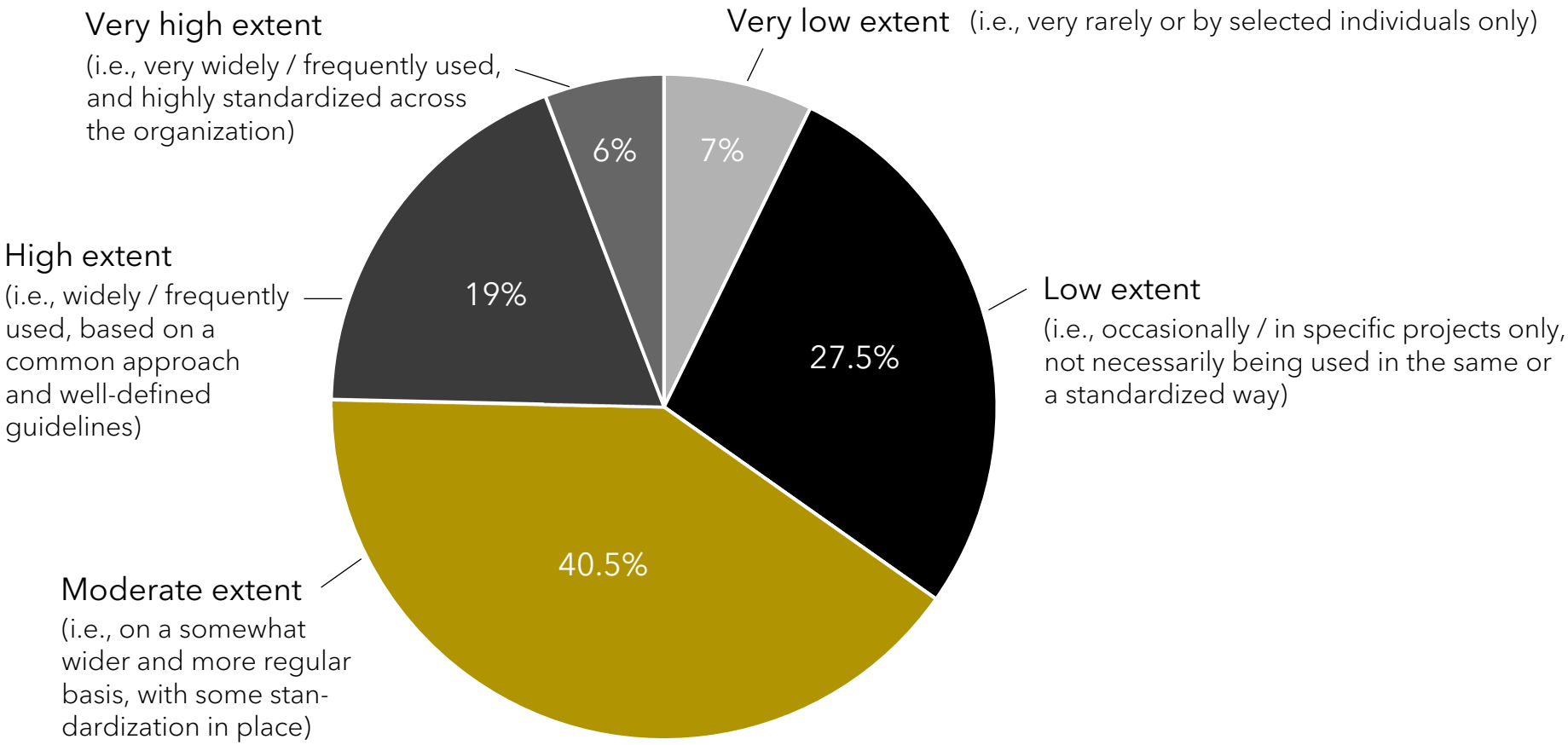
– multiple choices possible –



→ 3.2.1 – 3.2.7
→ 3.3.1 – 3.3.7
→ 3.4.1 – 3.4.7
→ 3.5.1 – 3.5.7

3.2.1 – BPMN | Usage Extent

To what extent is the BPMN notation applied (and are BPMN representations / visualizations created and used) in your organization?



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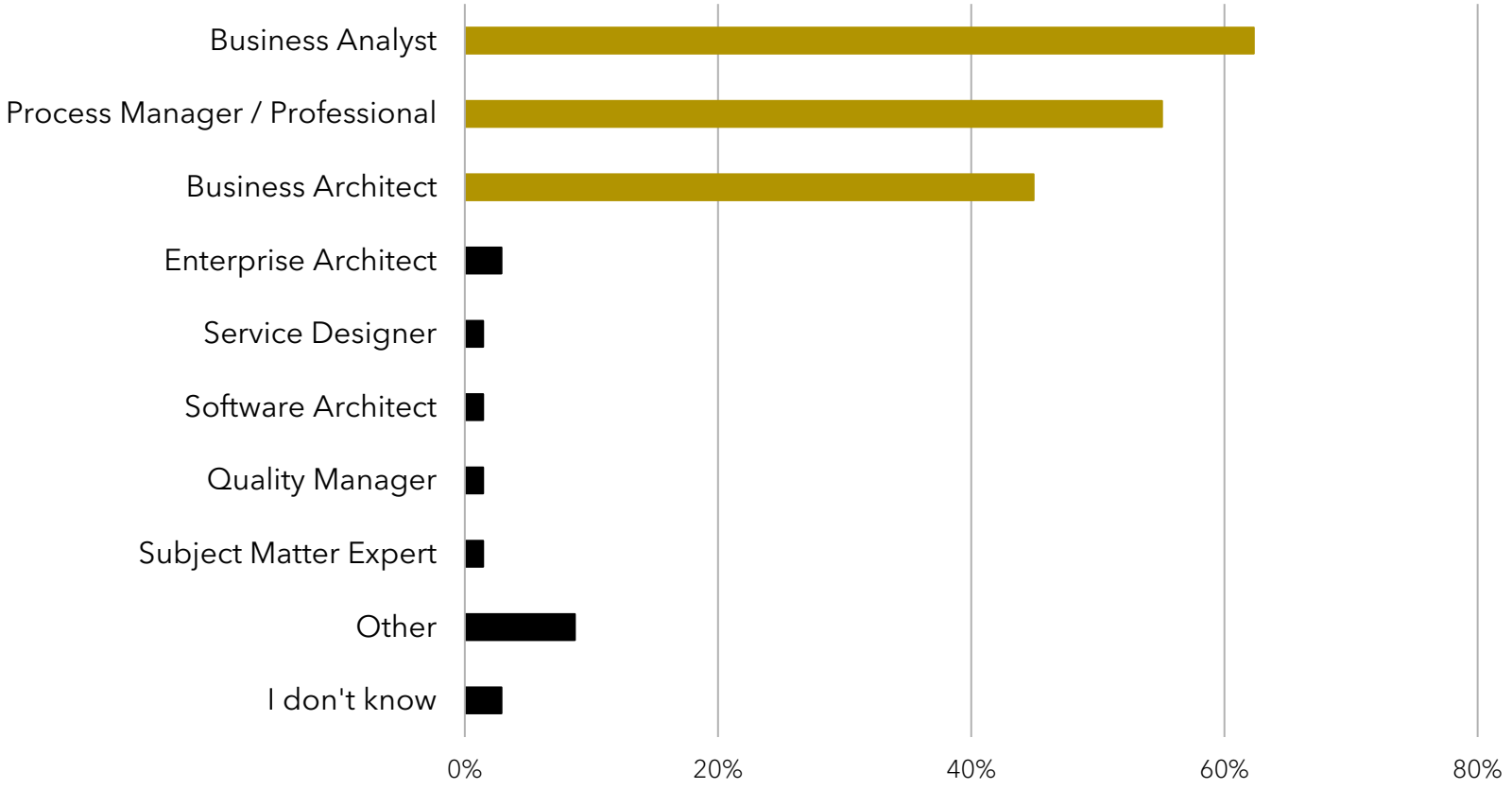
Which roles in your organization create BPMN representations / visualizations?

– multiple choices possible –



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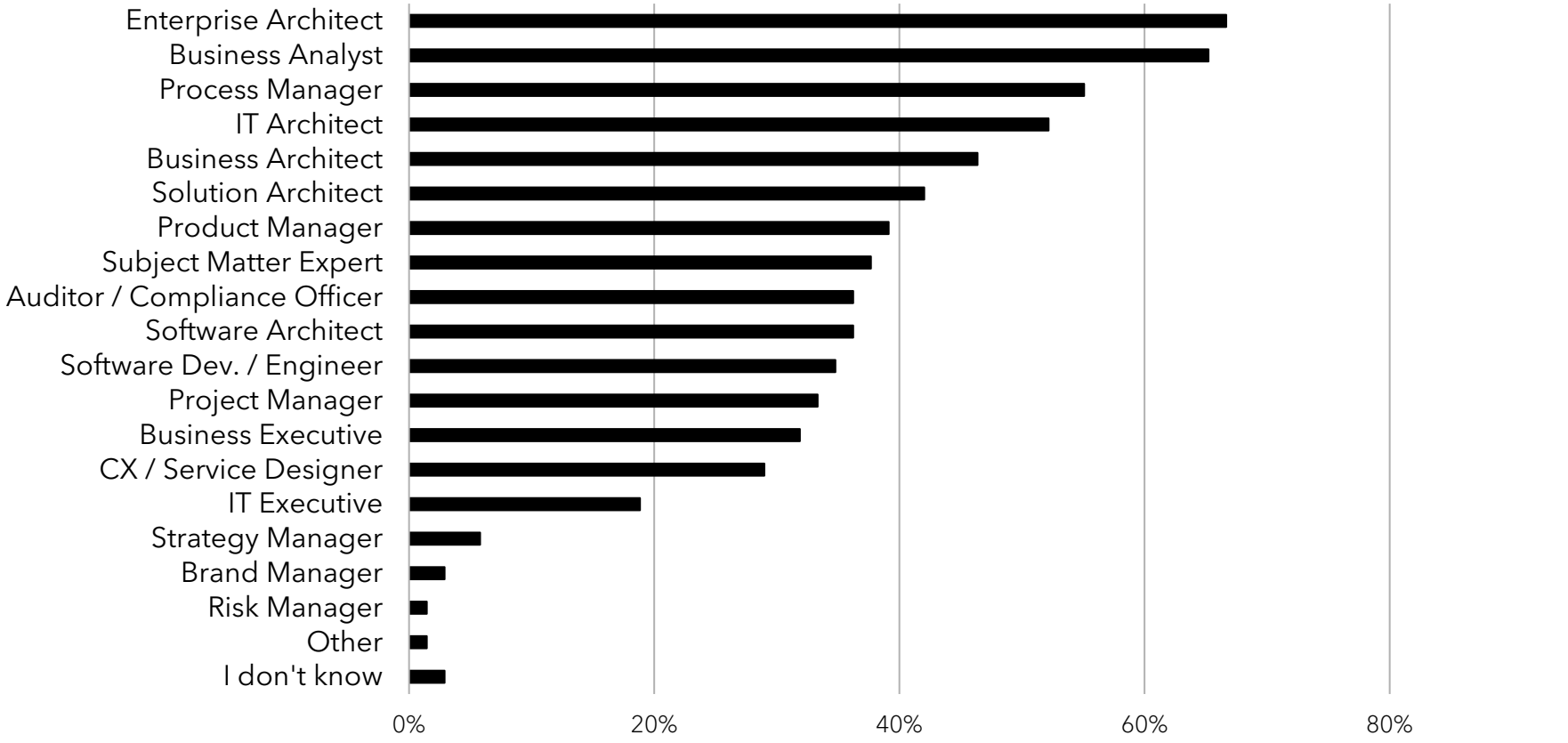
Which roles in your organization are consumers of and make use of BPMN representations / visualizations?

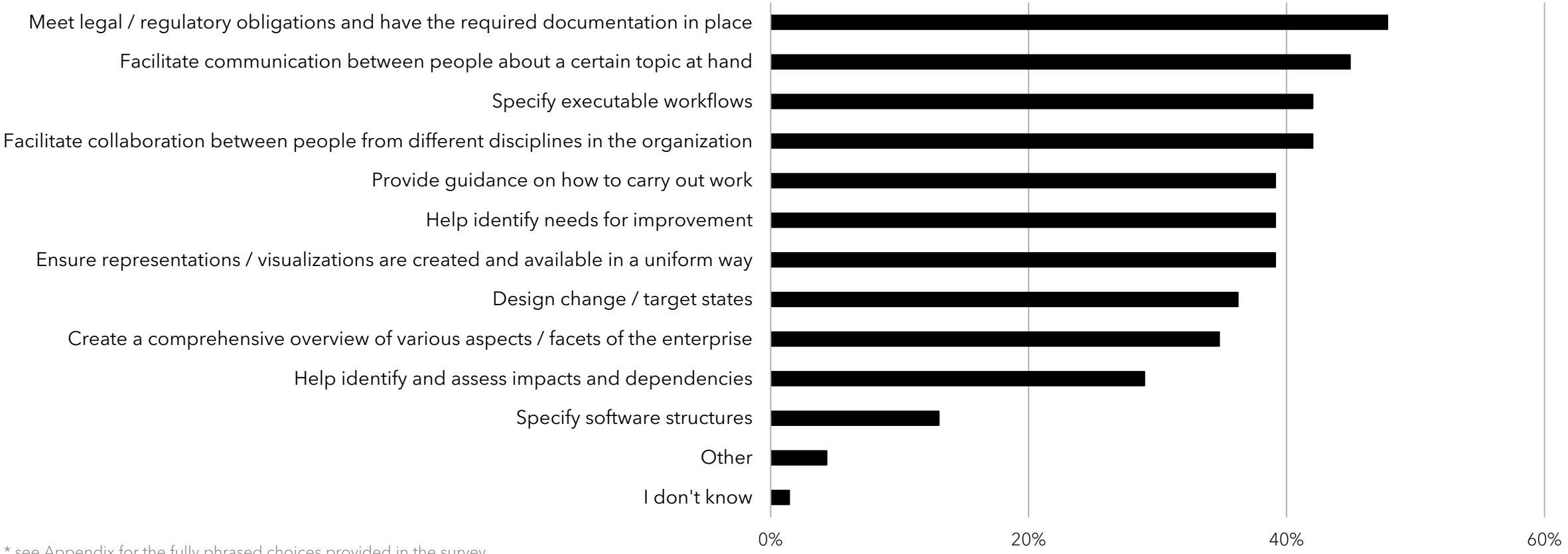
– multiple choices possible –



3.2.4 – BPMN | Main Purposes

What are the main purposes of using BPMN at your organization?

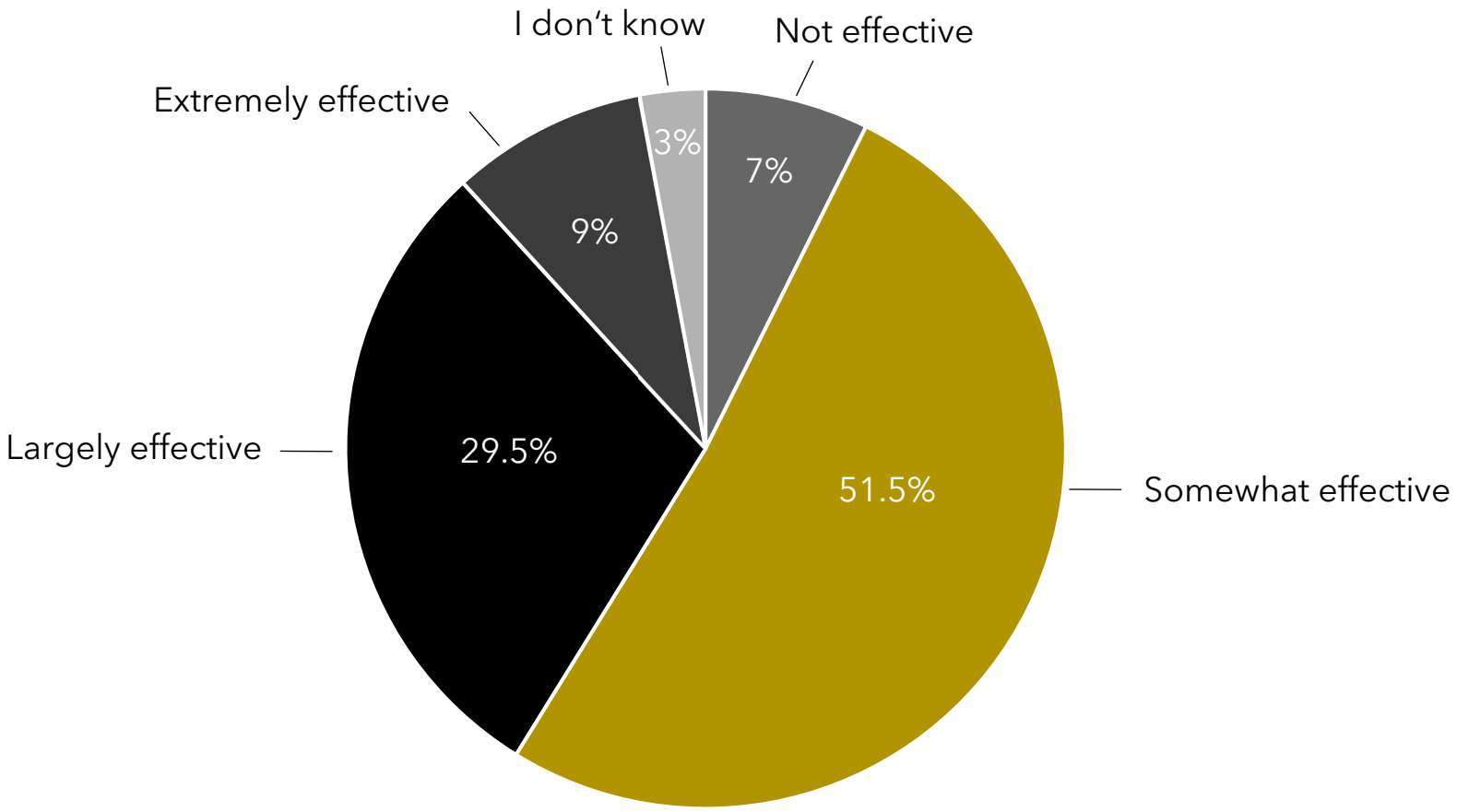
– multiple choices possible – *



* see Appendix for the fully phrased choices provided in the survey

ACROSS AHEAD

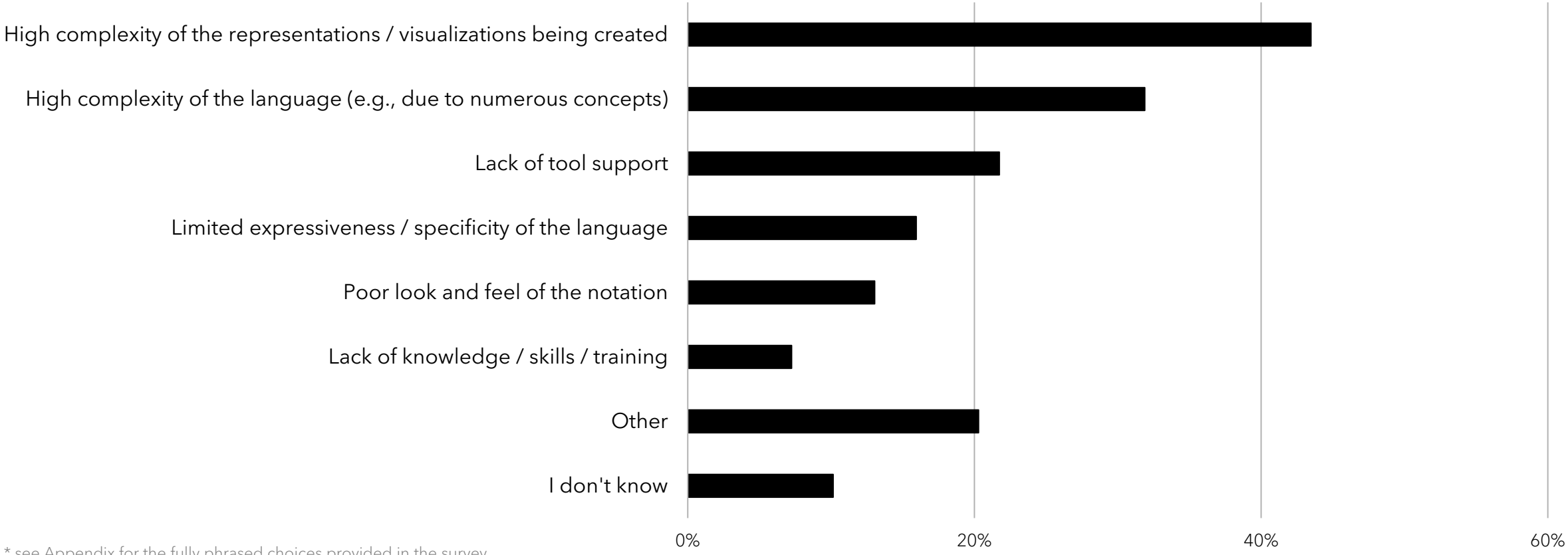
How effective is the use of BPMN to serve the above purposes at your organization?



3.2.6 – BPMN | Main Challenges

What are the main challenges in making effective use of BPMN at your organization?

– multiple choices possible –*



* see Appendix for the fully phrased choices provided in the survey

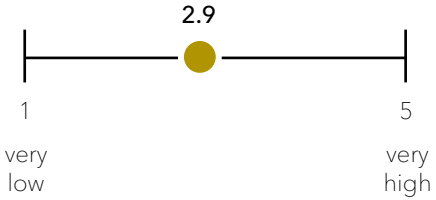
3.2.7 – BPMN | Summary

Main Purposes

1. Meet legal / regulatory obligations and have the required documentation in place (48%)
2. Facilitate communication […] about a certain topic at hand (45%)
3. Specify executable workflows (42%)
3. Facilitate collaboration between people from different disciplines in the organization (42%)
4. Provide guidance on how to carry out work (39%)

Usage Extent

Slightly below moderate



Main Challenges

1. High complexity of the representations / visualizations being created, resulting in limited understanding among certain stakeholders (43%)
2. High complexity of the language (e.g., due to numerous concepts), resulting in high entry barriers (32%)
3. Lack of tool support for the creation and maintenance of the representations / visualizations (22%)
4. Limited expressiveness / specificity of the language (16%)
5. Poor look and feel of the notation (13%)

Top Creators

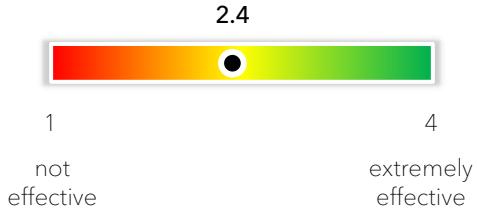
1. Business Analyst (62%)
2. Process Manager/ Professional (55%)
3. Business Architect (45%)
4. Other (9%)

Top Consumers

1. Enterprise Architect (67%)
2. Business Analyst (65%)
3. Process Manager (55%)
4. IT Architect (52%)
5. Business Architect (46%)
6. Solution Architect (42%)

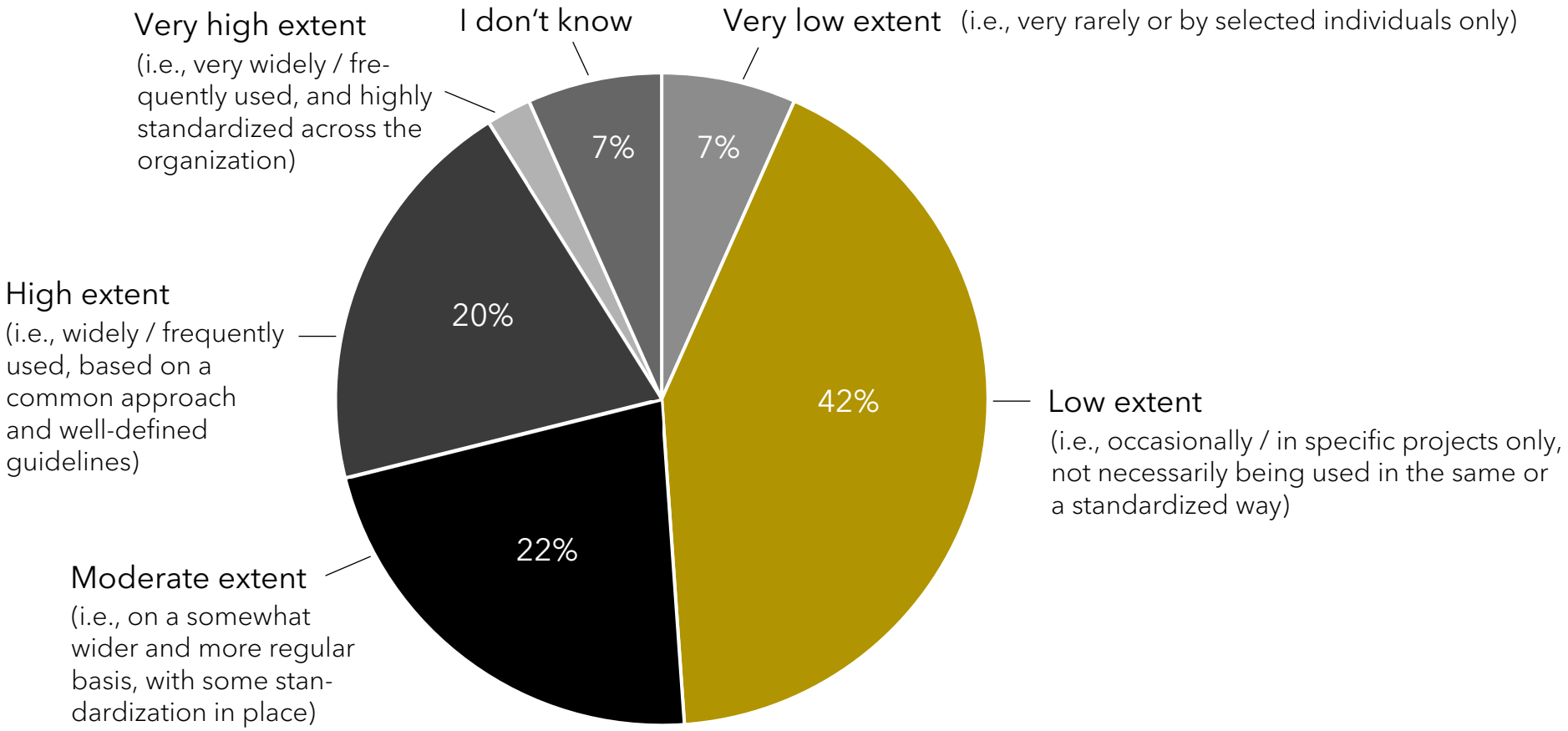
Effectiveness

Between somewhat & largely effective



ACROSS AHEAD

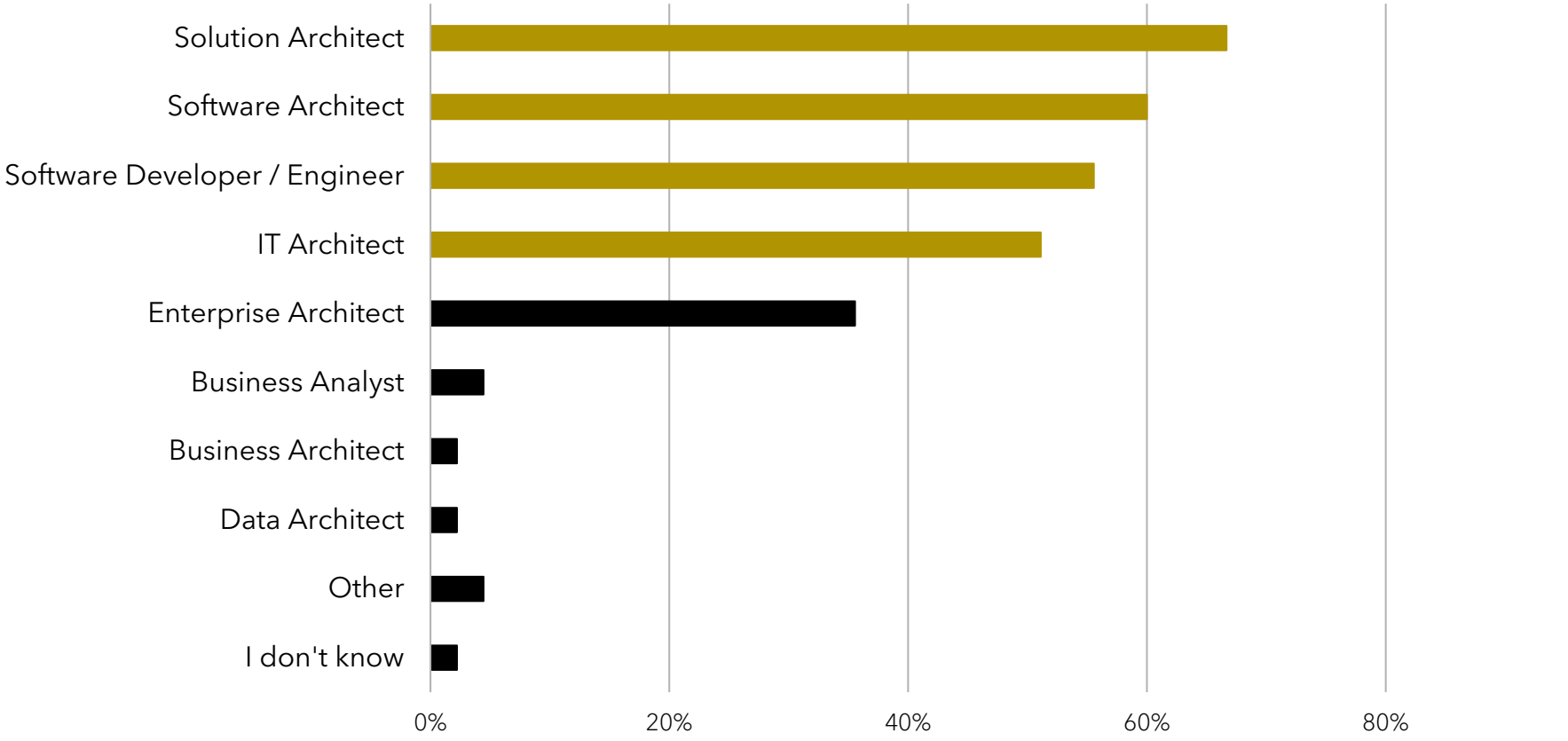
To what extent is the UML notation applied (and are UML representations / visualizations created and used) in your organization?



ACROSS AHEAD

Which roles in your organization create UML representations / visualizations?

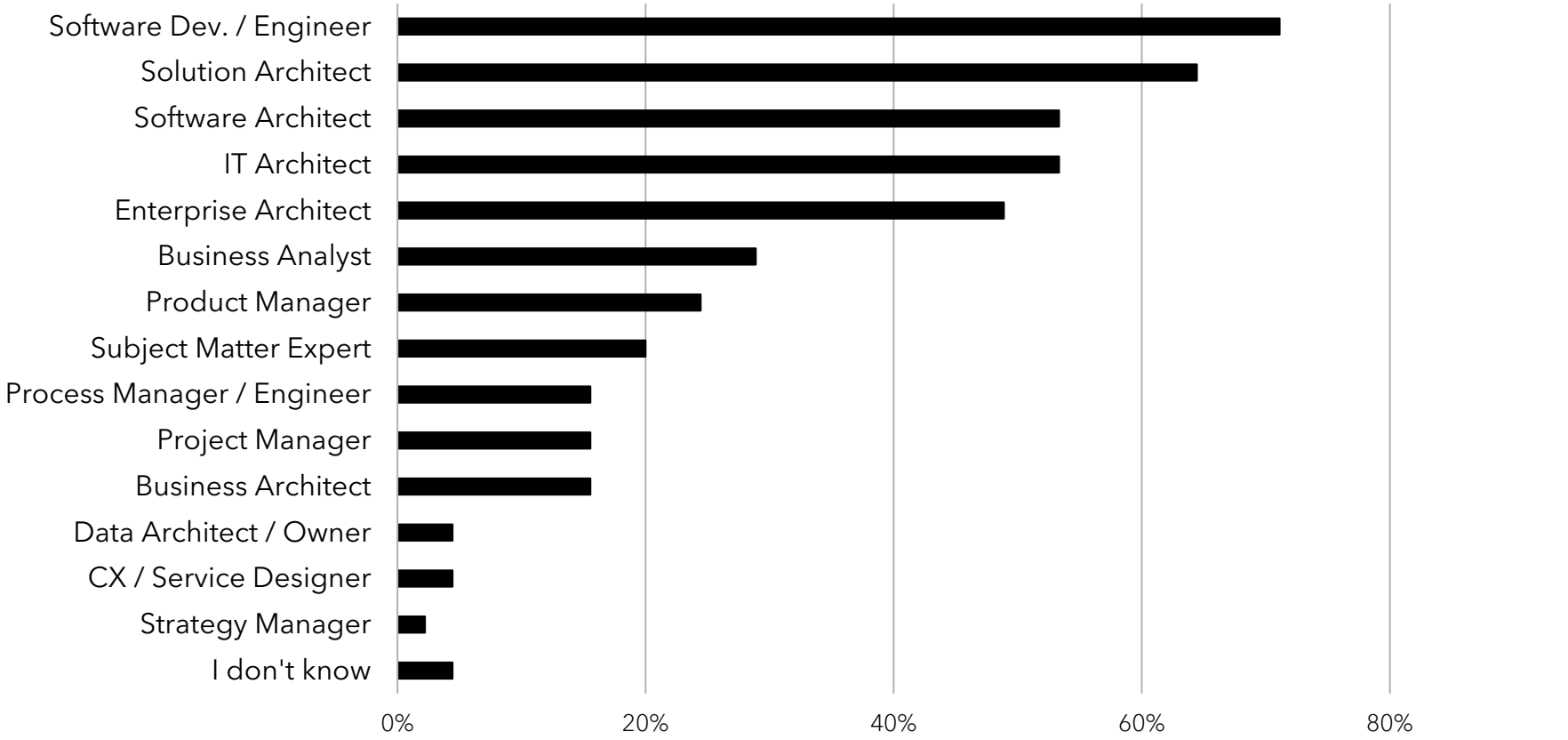
– multiple choices possible –



ACROSS AHEAD

Which roles in your organization are consumers of and make use of UML representations / visualizations?

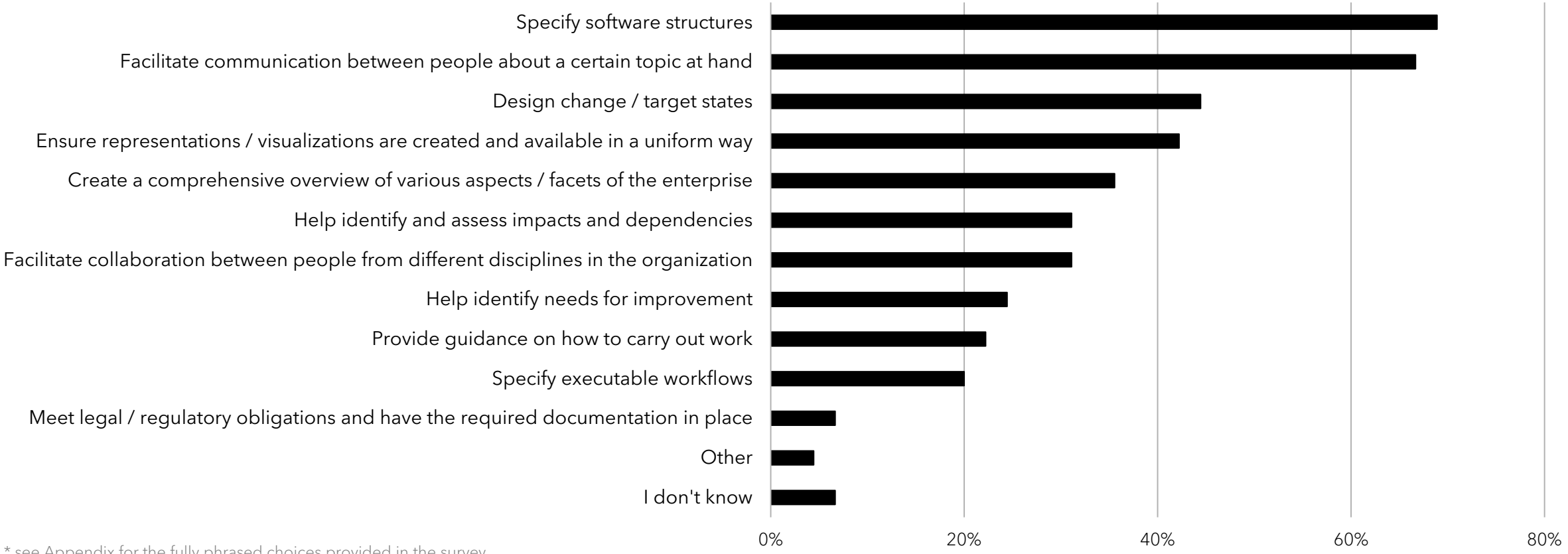
– multiple choices possible –



ACROSS AHEAD

What are the main purposes of using UML at your organization?

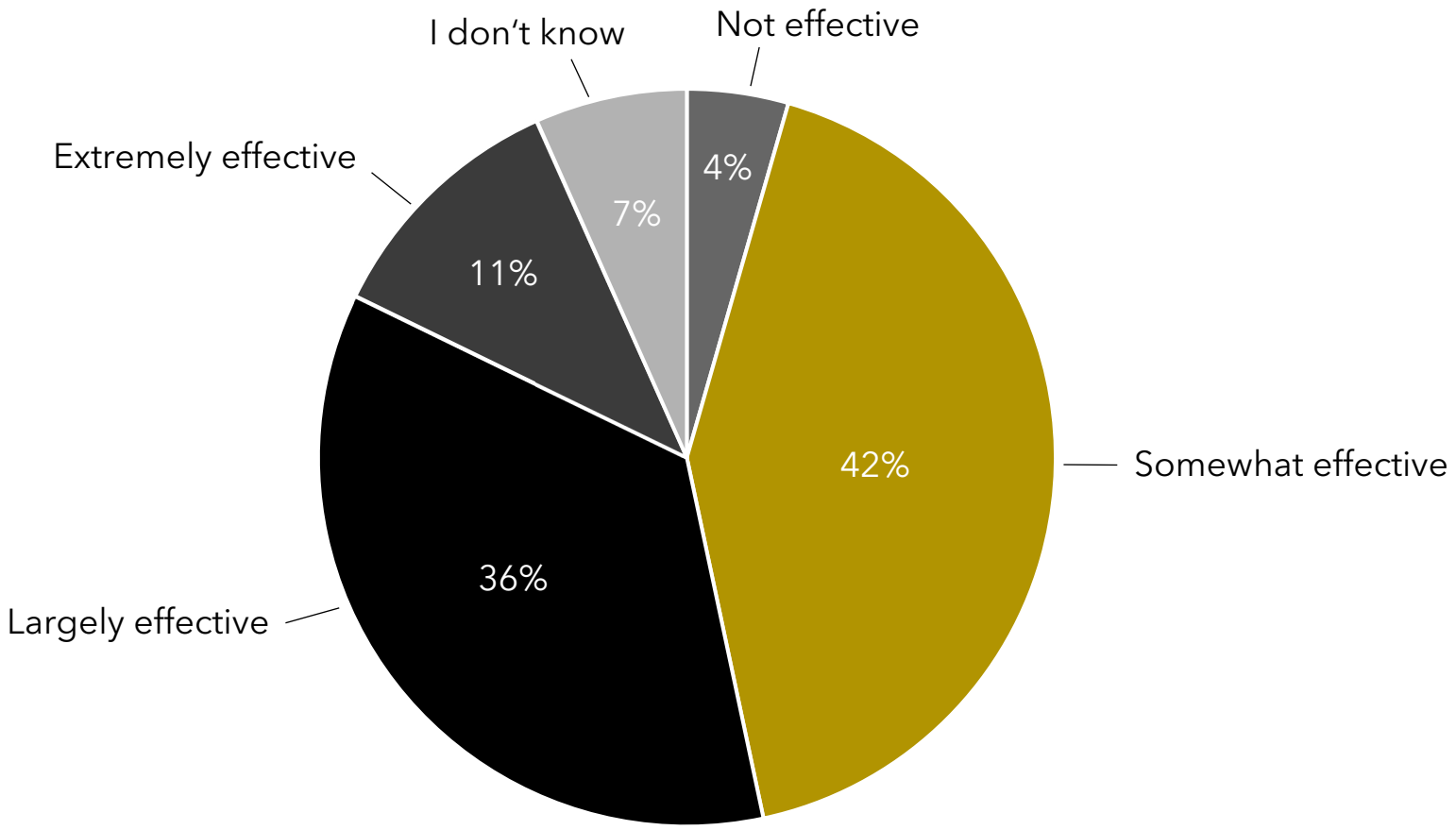
– multiple choices possible – *



* see Appendix for the fully phrased choices provided in the survey

ACROSS AHEAD

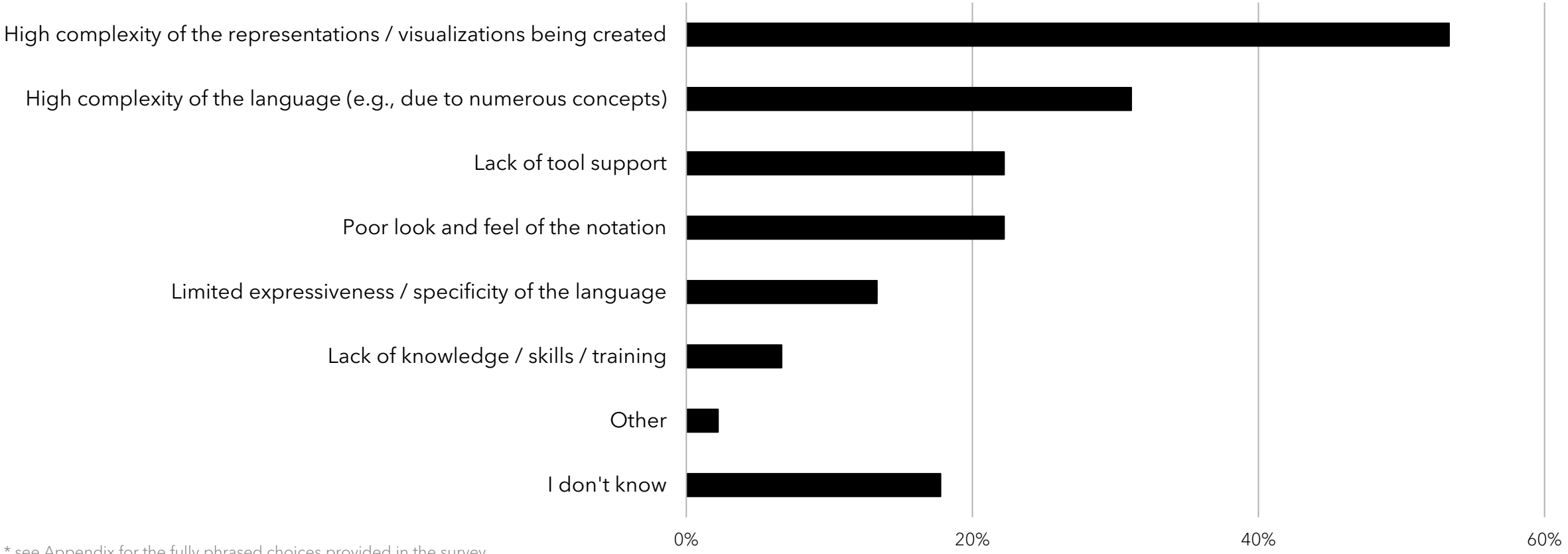
How effective is the use of UML to serve the above purposes at your organization?



ACROSS AHEAD

What are the main challenges in making effective use of UML at your organization?

– multiple choices possible – *



* see Appendix for the fully phrased choices provided in the survey

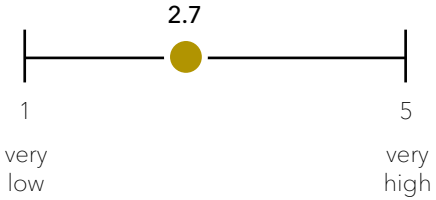
3.3.7 – UML | Summary

Main Purposes

1. Specify software structures (69%)
2. Facilitate communication between people about a certain topic at hand (67%)
3. Design change / target states (44%)
4. Ensure representations are created and available in a uniform way (42%)
5. Create a comprehensive overview […] of the enterprise (36%)

Usage Extent

Somewhat below moderate



Main Challenges

1. High complexity of the representations / visualizations being created, resulting in limited understanding among certain stakeholders (53%)
2. High complexity of the language (e.g., due to numerous concepts), resulting in high entry barriers (31%)
3. Lack of tool support for the creation and maintenance of the representations / visualizations (22%)
3. Poor look and feel of the notation (22%)
4. Limited expressiveness / specificity of the language (13%)

Top Creators

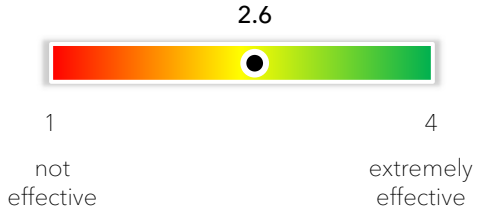
1. Solution Architect (67%)
2. Software Architect (60%)
3. Software Dev. / Engineer (56%)
4. IT Architect (51%)
5. Enterprise Architect (36%)

Top Consumers

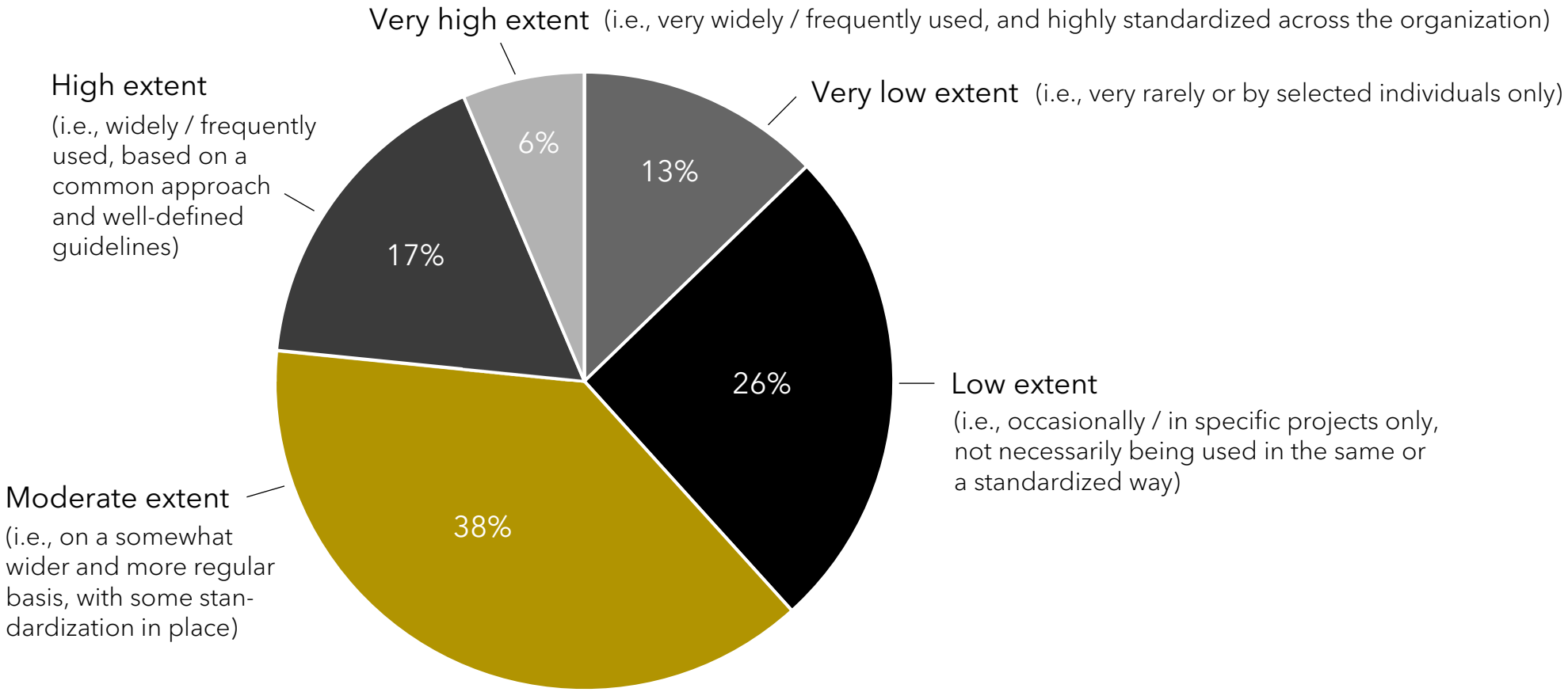
1. Software Dev. / Engineer (71%)
2. Solution Architect (64%)
3. Software Architect (53%)
3. IT Architect (53%)
4. Enterprise Architect (49%)
5. Business Analyst (29%)

Effectiveness

Between somewhat & largely effective



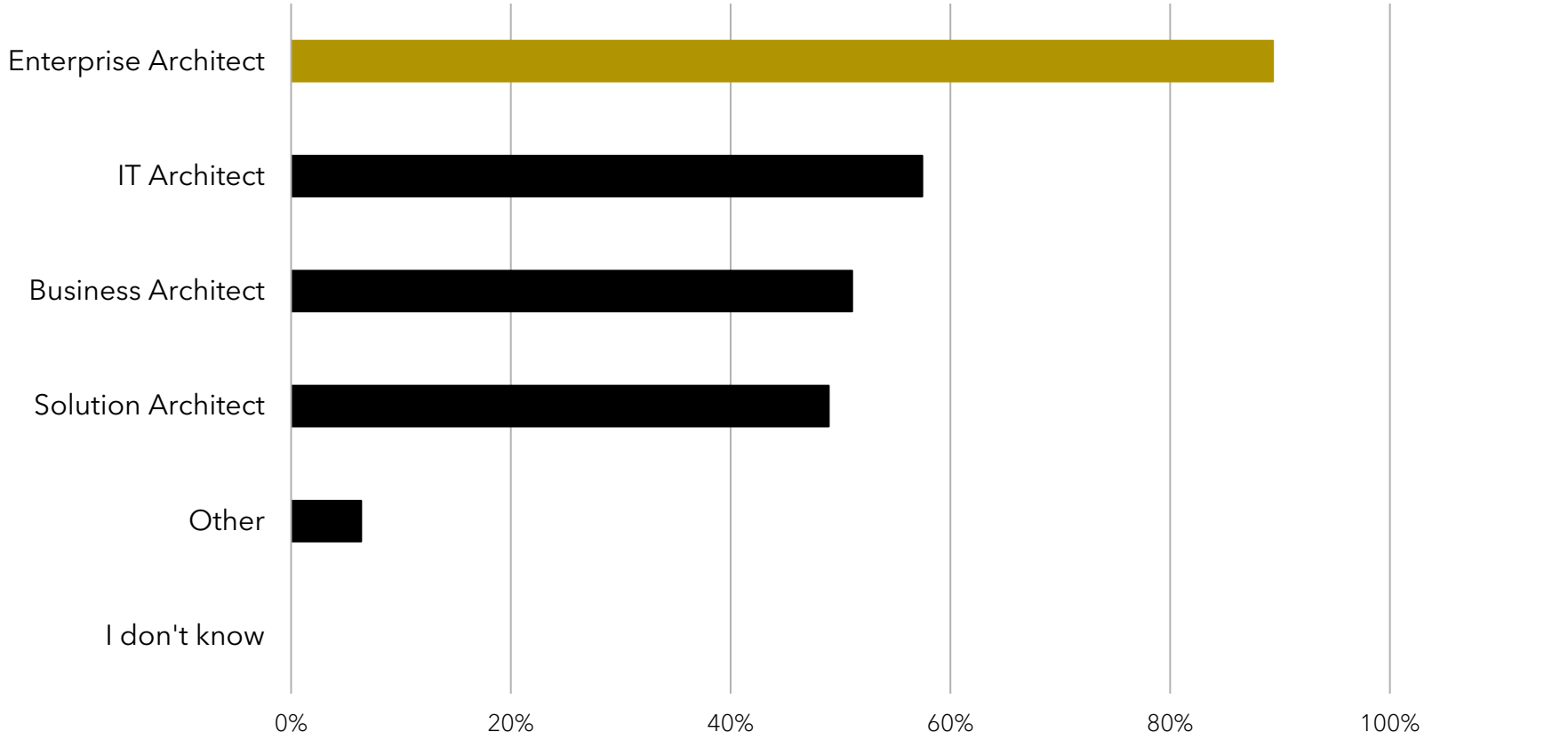
To what extent is the ArchiMate notation applied (and are ArchiMate representations / visualizations created and used) in your organization?



ACROSS AHEAD

Which roles in your organization create ArchiMate representations / visualizations?

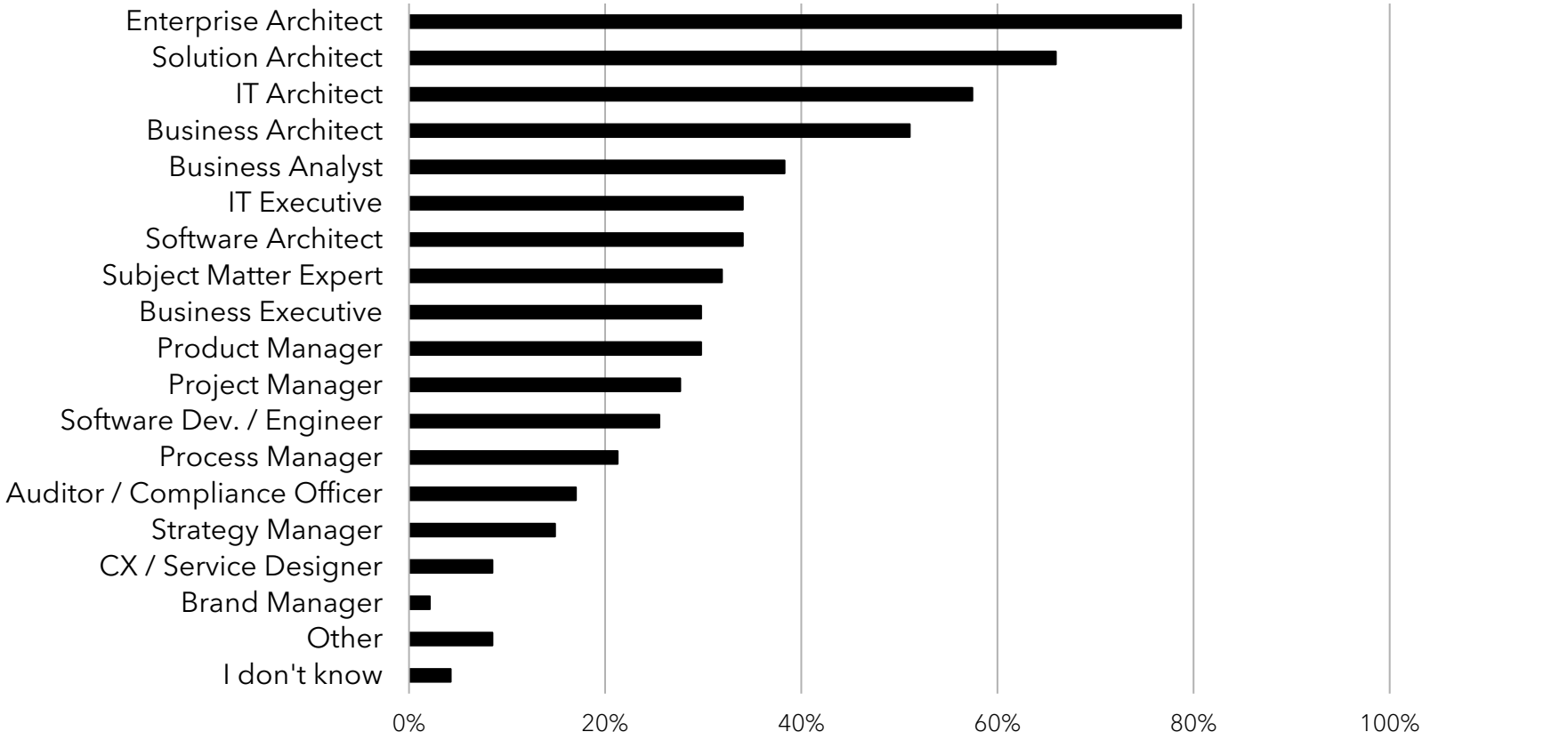
– multiple choices possible –



ACROSS AHEAD

Which roles in your organization are consumers of and make use of ArchiMate representations / visualizations?

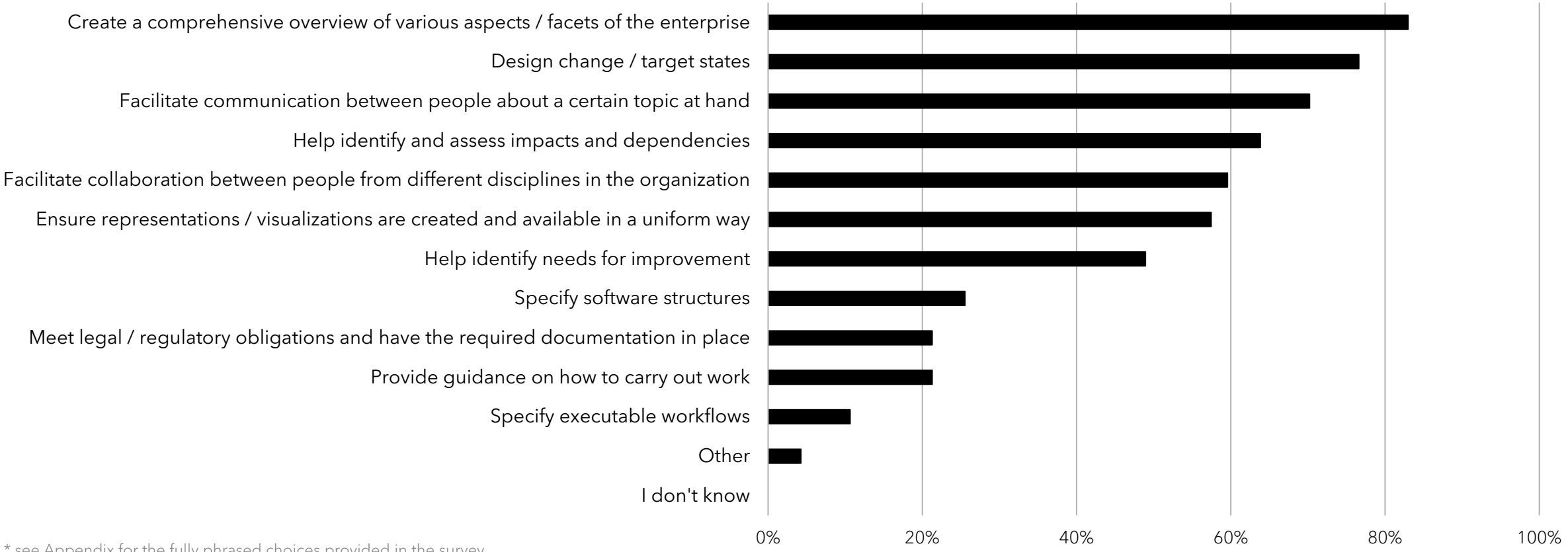
– multiple choices possible –



ACROSS AHEAD

What are the main purposes of using ArchiMate at your organization?

– multiple choices possible – *



* see Appendix for the fully phrased choices provided in the survey

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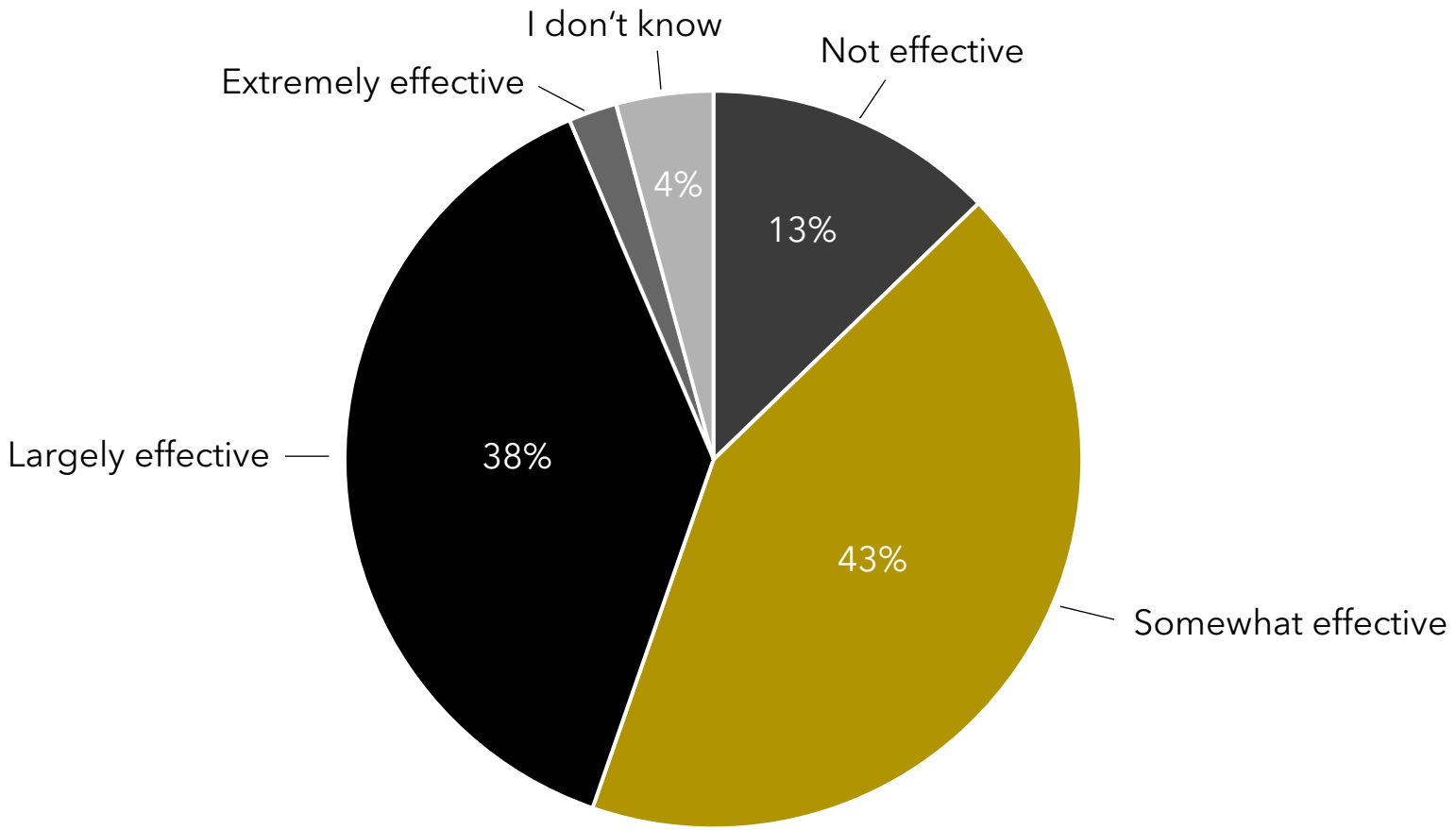
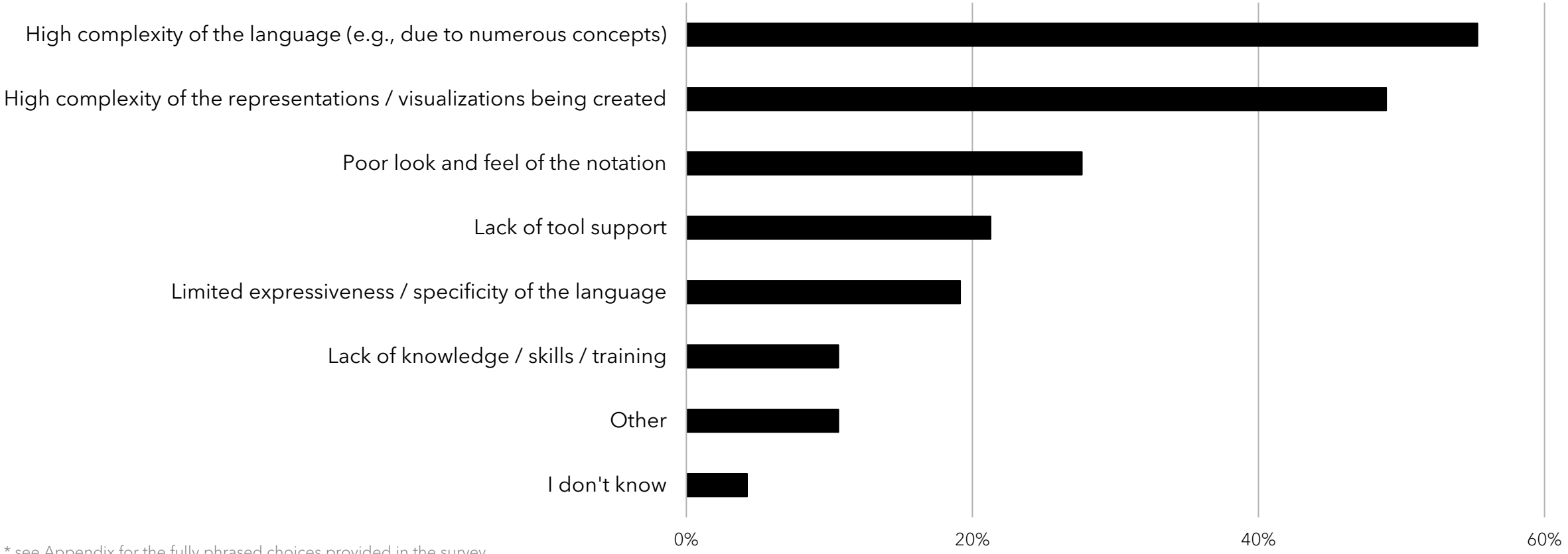
How effective is the use of ArchiMate to serve the above purposes at your organization?



3.4.6 – ArchiMate | Main Challenges

What are the main challenges in making effective use of ArchiMate at your organization?

– multiple choices possible – *



* see Appendix for the fully phrased choices provided in the survey

3.4.7 – ArchiMate | Summary

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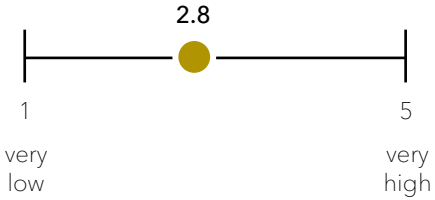
Main Purposes

1. Create a comprehensive overview […] of the enterprise (83%)
2. Design change / target states (77%)
3. Facilitate communication […] about a certain topic at hand (70%)
4. Help identify and assess impacts and dependencies (64%)
5. Facilitate collaboration between people from different disciplines in the organization (60%)
6. Ensure representations are created and available in a uniform way (57%)

Usage Extent

Slightly below moderate



Main Challenges

1. High complexity of the language (e.g., due to numerous concepts), resulting in high entry barriers (55%)
2. High complexity of the representations / visualizations being created, resulting in limited understanding among certain stakeholders (49%)
3. Poor look and feel of the notation (28%)
4. Lack of tool support for the creation and maintenance of the representations / visualizations (21%)
5. Limited expressiveness / specificity of the language (19%)

Top Creators

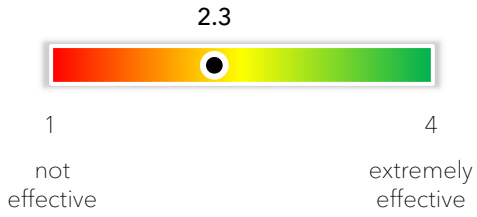
1. Enterprise Architect (89%)
2. IT Architect (57%)
3. Business Architect (51%)
4. Solution Architect (49%)
5. Other (6%)

Top Consumers

1. Enterprise Architect (79%)
2. Solution Architect (66%)
3. IT Architect (57%)
4. Business Architect (51%)
5. Business Analyst (38%)
6. IT Executive (34%)

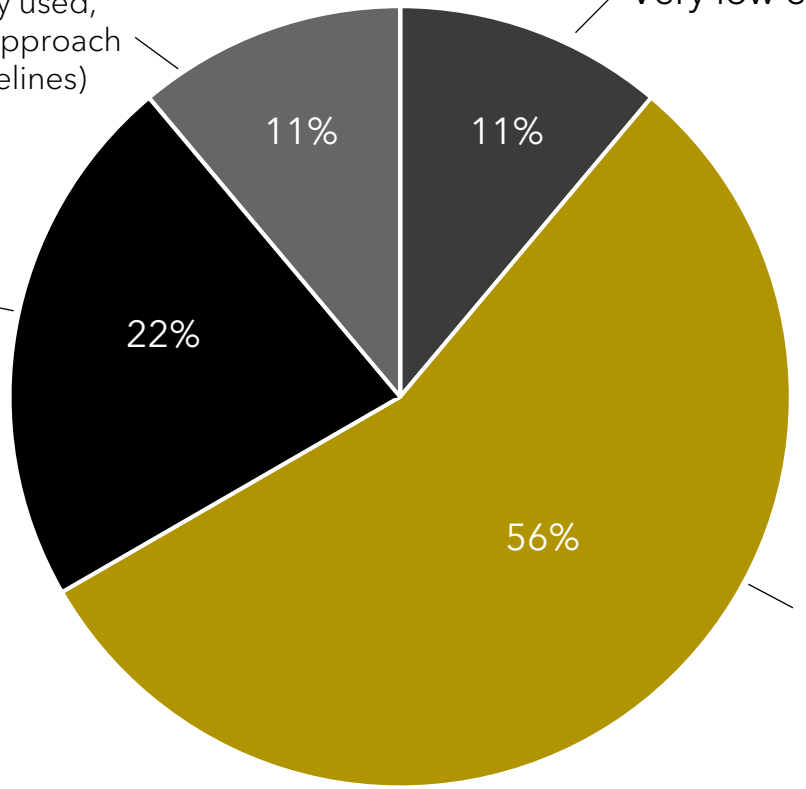
Effectiveness

Just above somewhat effective



ACROSS AHEAD

To what extent is the EDGY notation applied (and are EDGY representations / visualizations created and used) in your organization?



High extent
(i.e., widely / frequently used, based on a common approach and well-defined guidelines)

Very low extent (i.e., very rarely or by selected individuals only)

Moderate extent
(i.e., on a somewhat wider and more regular basis, with some standardization in place)

Low extent
(i.e., occasionally / in specific projects only, not necessarily being used in the same or a standardized way)

0%: Very high extent
(i.e., very widely / frequently used, and highly standardized across the organization)

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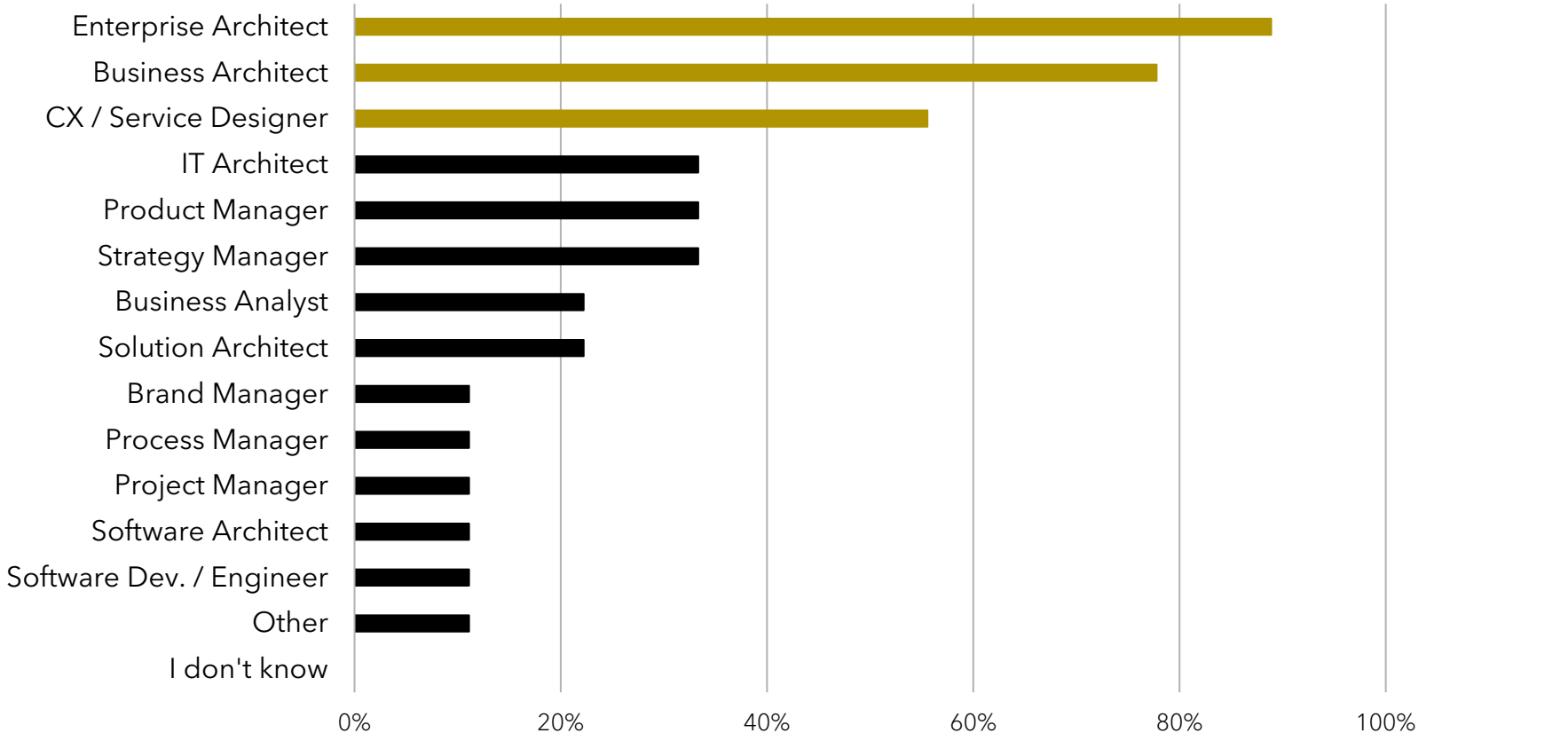
Which roles in your organization create EDGY representations / visualizations?

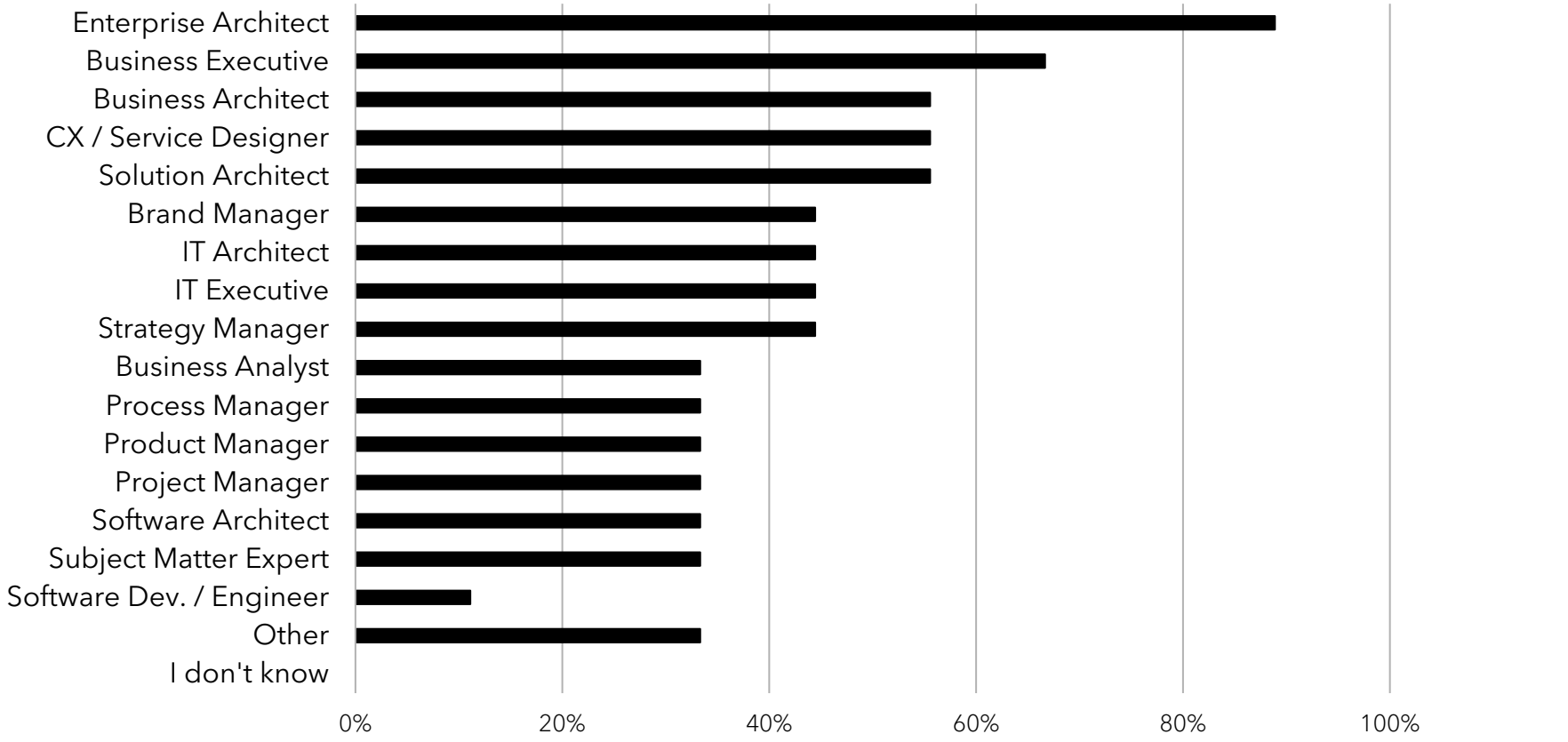
– multiple choices possible –



ACROSS AHEAD

Which roles in your organization are consumers of and make use of EDGY representations / visualizations?

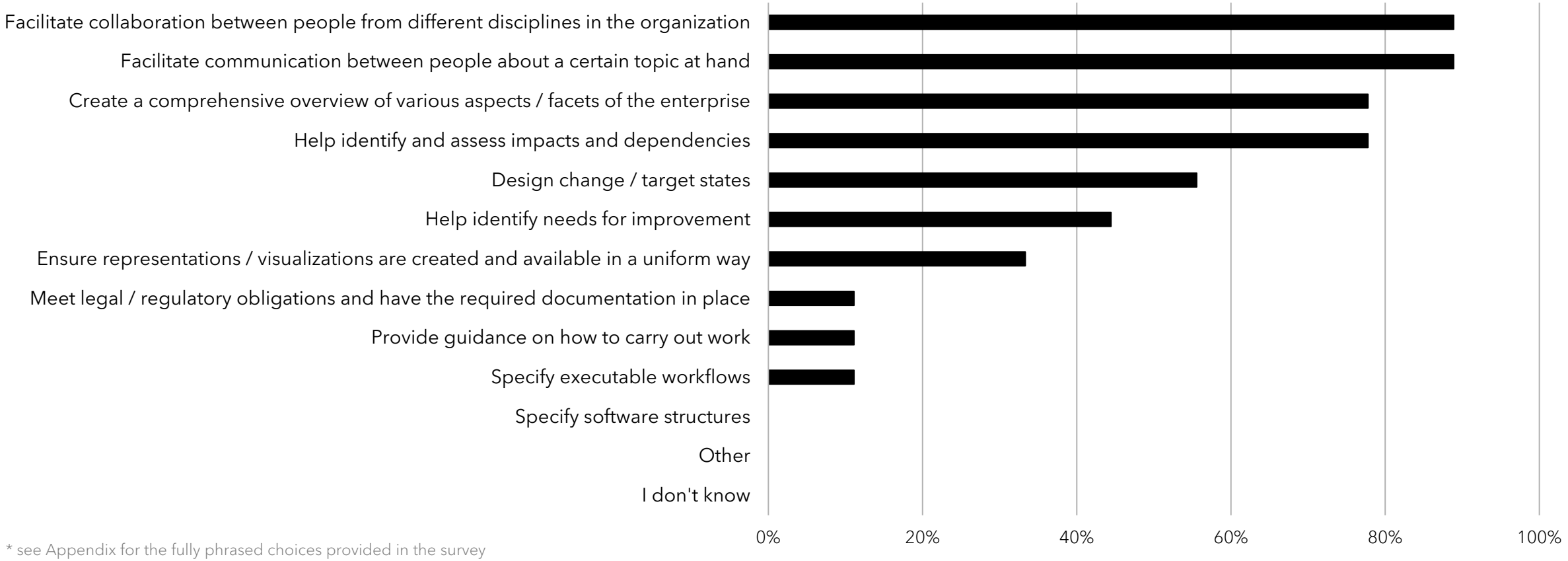
– multiple choices possible –



3.5.4 – EDGY | Main Purposes

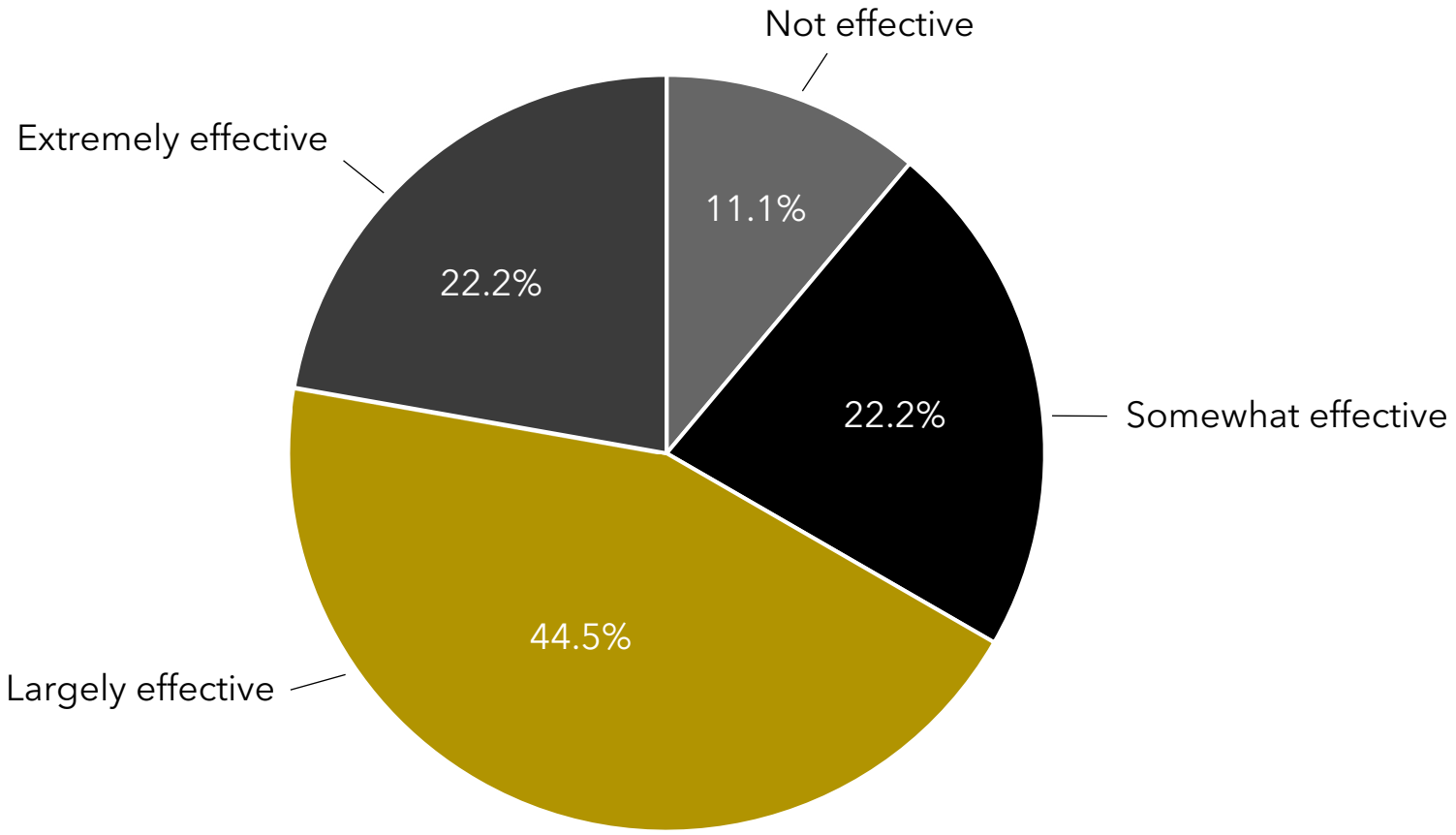
What are the main purposes of using EDGY at your organization?

– multiple choices possible – *



* see Appendix for the fully phrased choices provided in the survey

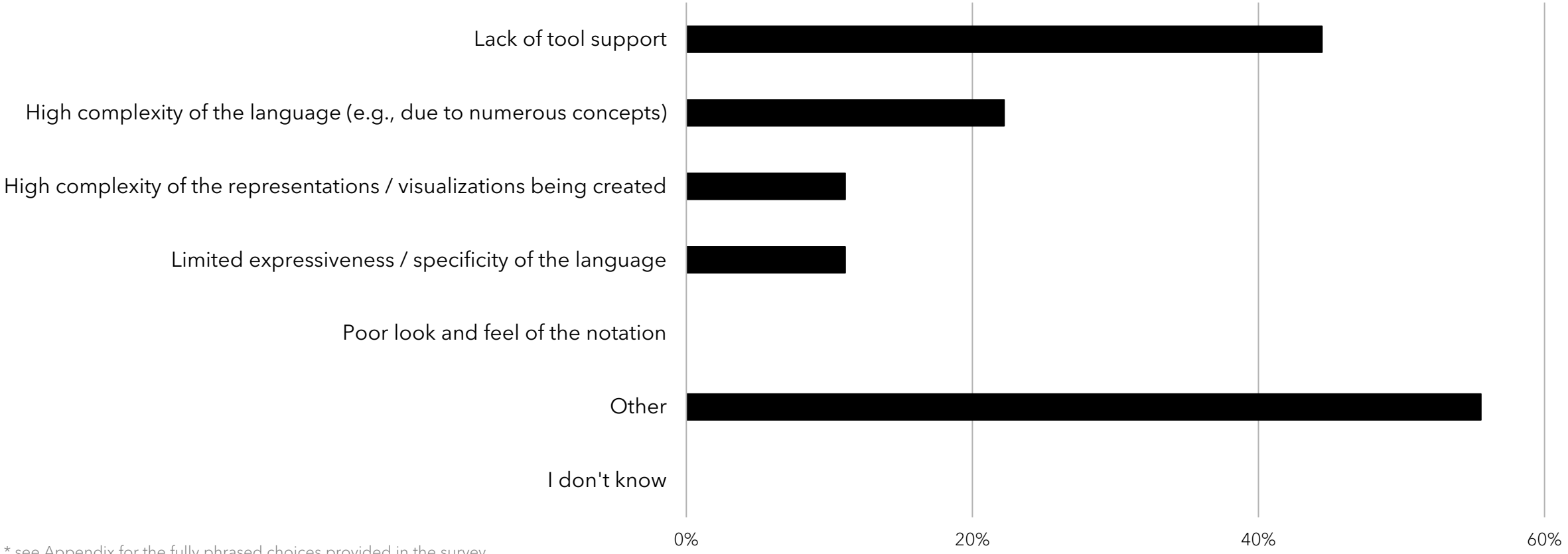
How effective is the use of EDGY to serve the above purposes at your organization?



3.5.6 – EDGY | Main Challenges

What are the main challenges in making effective use of EDGY at your organization?

– multiple choices possible – *



* see Appendix for the fully phrased choices provided in the survey

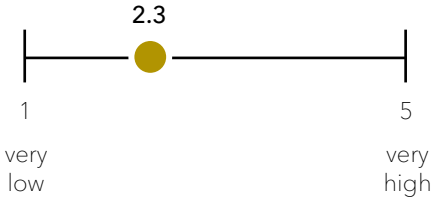
3.5.7 – EDGY | Summary

Main Purposes

1. Facilitate collaboration between people from different disciplines in the organization (89%)
1. Facilitate communication between people about a certain topic at hand (89%)
2. Create a comprehensive overview […] of the enterprise (78%)
2. Help identify and assess impacts and dependencies (78%)
3. Design change / target states (56%)

Usage Extent

Slightly above low



Main Challenges

1. Other (56%)
   - e.g., lack of adoption and understanding of the benefits
2. Lack of tool support for the creation and maintenance of the representations / visualizations (44%)
3. High complexity of the language (e.g., due to numerous concepts), resulting in high entry barriers (22%)
4. High complexity of the representations / visualizations being created, resulting in limited understanding among certain stakeholders (11%)
4. Limited expressiveness / specificity of the language (11%)

Top Creators

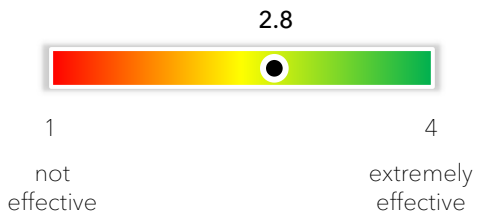
1. Enterprise Architect (89%)
2. Business Architect (78%)
3. CX / Service Designer (56%)
4. IT Architect (33%)
4. Product Manager (33%)
4. Strategy Manager (33%)

Top Consumers

1. Enterprise Architect (89%)
2. Business Executive (67%)
3. Business Architect (56%)
3. CX / Service Designer (56%)
3. Solution Architect (56%)
4. Various (44%)

Effectiveness

Just below largely effective



Summary: Findings and Key Insights

ACROSS AHEAD

- Among the languages within the focus of the survey, BPMN appears to be most widely used in practice (with almost 85% of the organizations in the sample doing so), followed by ArchiMate and UML (with more than 60%).
- The extent to which modeling languages are actually applied in organizations appears to be somewhat limited (between low and moderate extent on average). Among the languages in the survey, BPMN finds the highest and EDGY the lowest extent of adoption in organizations.
- Modeling languages are used by various different people in organizations. Top users of the different languages include:
    - BPMN representations are most often created by Business Analysts and / or Process Professionals, and consumed by various different roles.
    - Top creators and consumers of UML representations are Solution Architects, Software Architects, Software Developers / Engineers, and IT Architects.
    - ArchiMate modeling is predominantly “done by architects for architects” (incl. Business Architects).
    - EDGY representations are primarily created by architects, too. The target audience is wider though, with various non-architectural roles served being more common.
- Certain architectural roles are among the top users of not only one but several modeling languages.

Summary: Findings and Key Insights (cont.)

ACROSS AHEAD

- Any modeling language is typically used for numerous purposes (e.g., >5 at just under half of the organizations in the sample in case of ArchiMate), indicating that organizations expect to get a lot from modeling language use.
- A major rationale for use across all languages in the survey is facilitation of communication between people. Other top purposes vary though. Additional purposes which the different languages are primarily used for include:
  - BPMN: Specify executable workflows
  - UML: Specify software structures
  - ArchiMate: Create a comprehensive overview of the enterprise
  - EDGY: Facilitate collaboration across different disciplines
- The main challenges in making effective use of BPMN, UML, and ArchiMate are the high complexity of the languages (e.g., due to numerous concepts) and of the representations / visualizations being created. In contrast, the main challenges with the use of EDGY are the lack of tool support and the limited adoption / understanding of the benefits in organizations.

Summary: Findings and Key Insights (cont.)

ACROSS AHEAD

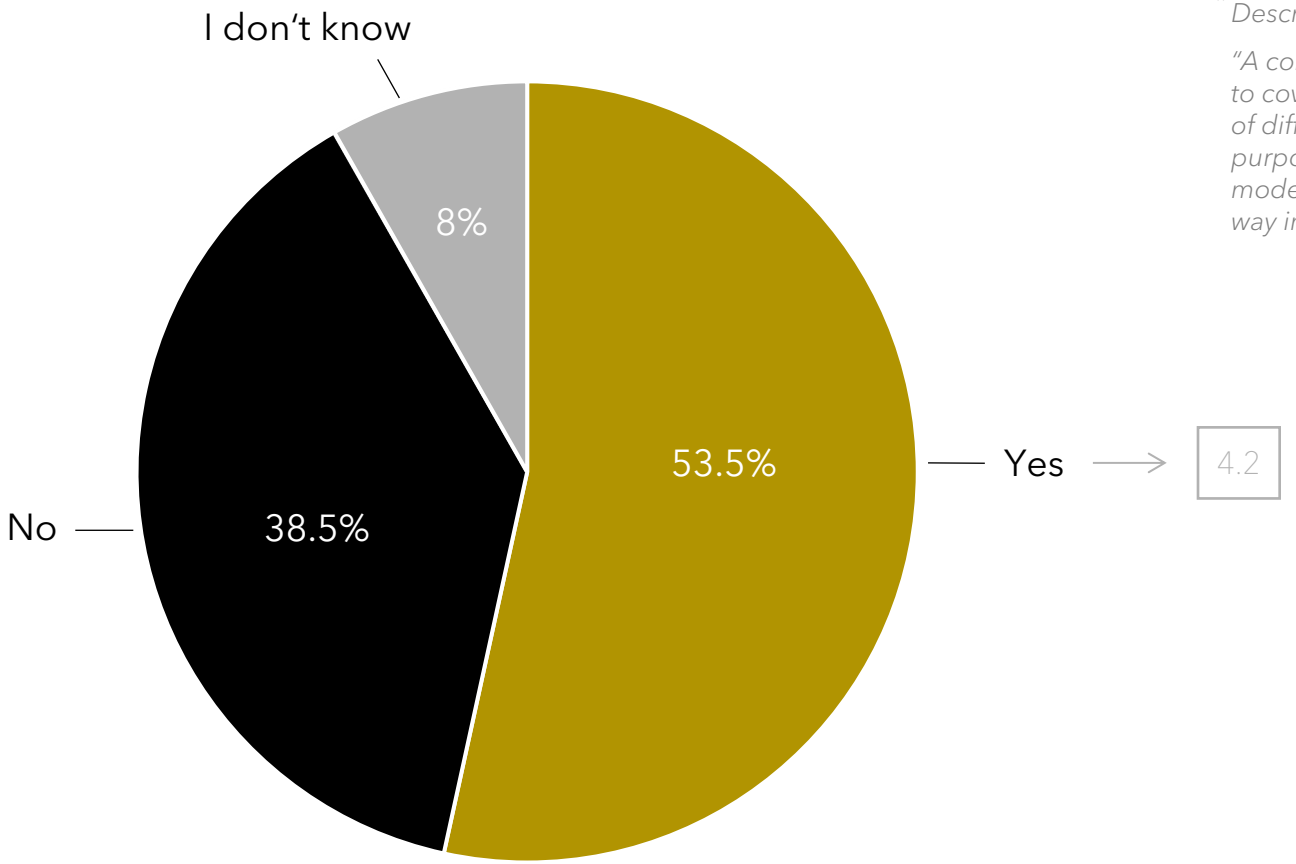
- On average, the effectiveness of modeling language use seems to be rather moderate. Other survey findings suggest various explanations, such as:
  - Very high expectations, with numerous purposes to be served
  - Modest adoption, with rather limited extent of use across the organization
  - Conceptual burden, with various concepts to cope with (and from which to choose the ones to use)
  - Little investment, given a lack of education and training
- Despite the limited extent of being applied in organizations to date, the use of EDGY is perceived to be most effective in serving the intended purposes (based on the relatively small number of responses available on EDGY use, as per the results of Question 3.1). The use of ArchiMate is perceived to be least effective.

ACROSS AHEAD

1. Organizational Background
2. Individual Role & Modeling Experience
3. Modeling Language Use
4. **Modeling Language Combination**

ACROSS AHEAD

At your organization, do you combine the use of different modeling languages in any way? *



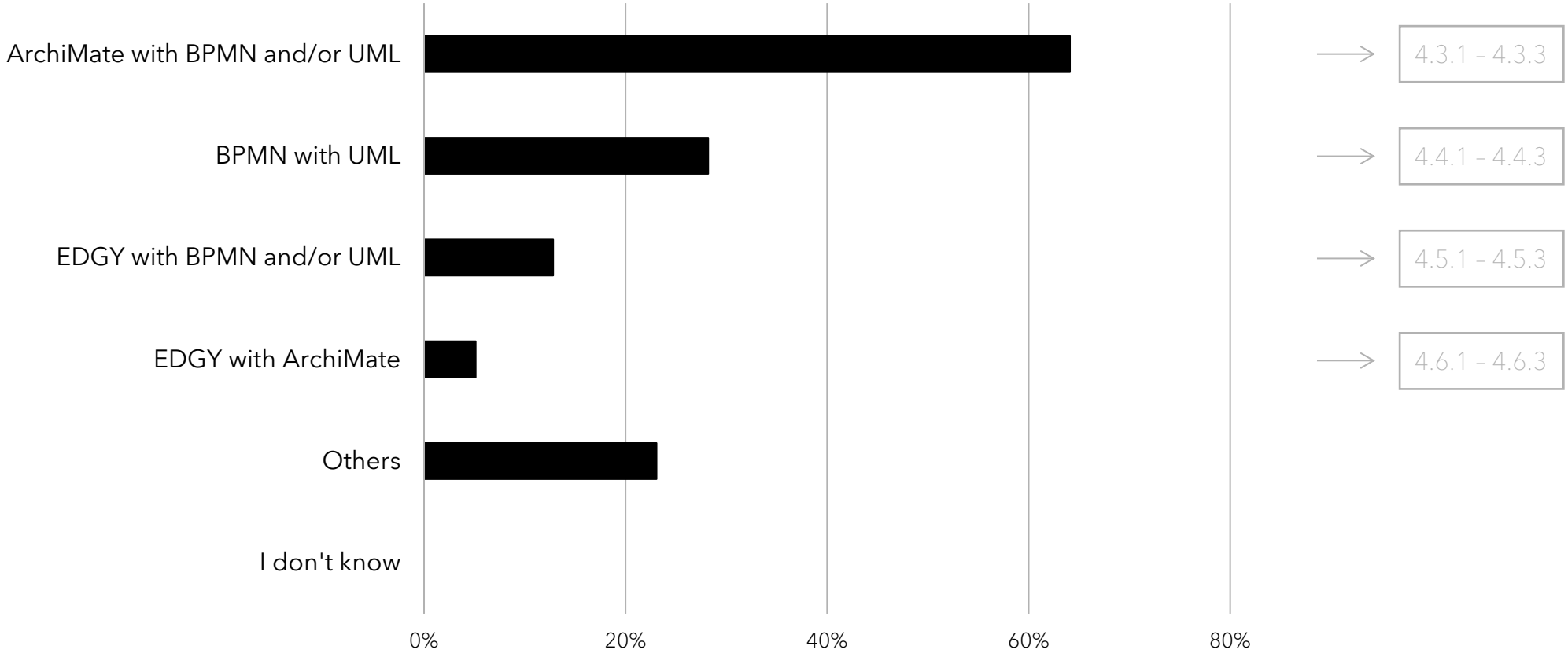
* *Description given in the survey:*

"A combined use of modeling languages in this context is meant to cover various scenarios. It may range from, e.g., taking advantage of different languages to create visual representations for different purposes / at different levels of detail to maintaining different models in one or several repositories / tools which are in some way integrated with one another."

ACROSS AHEAD

Which modeling languages do you use in a combined way at your organization?

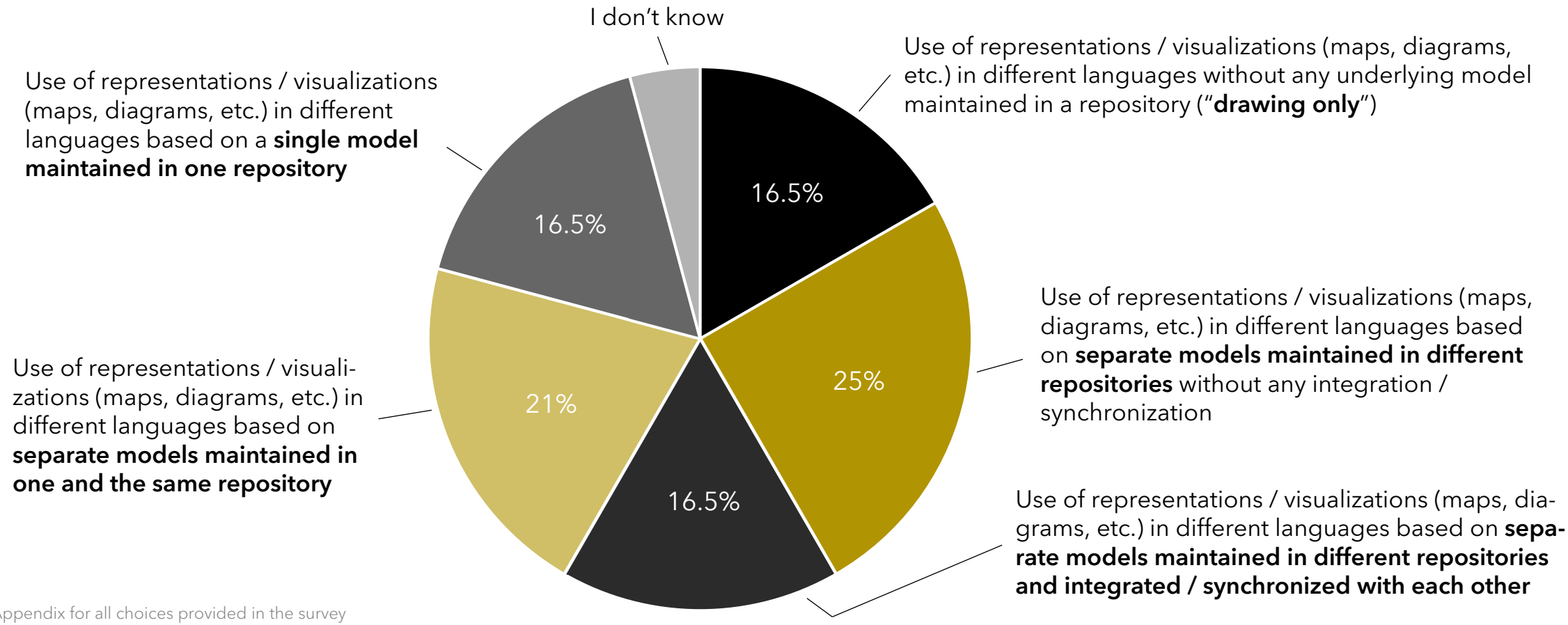
– multiple choices possible –



4.3.1 – 4.3.3
4.4.1 – 4.4.3
4.5.1 – 4.5.3
4.6.1 – 4.6.3

ACROSS AHEAD

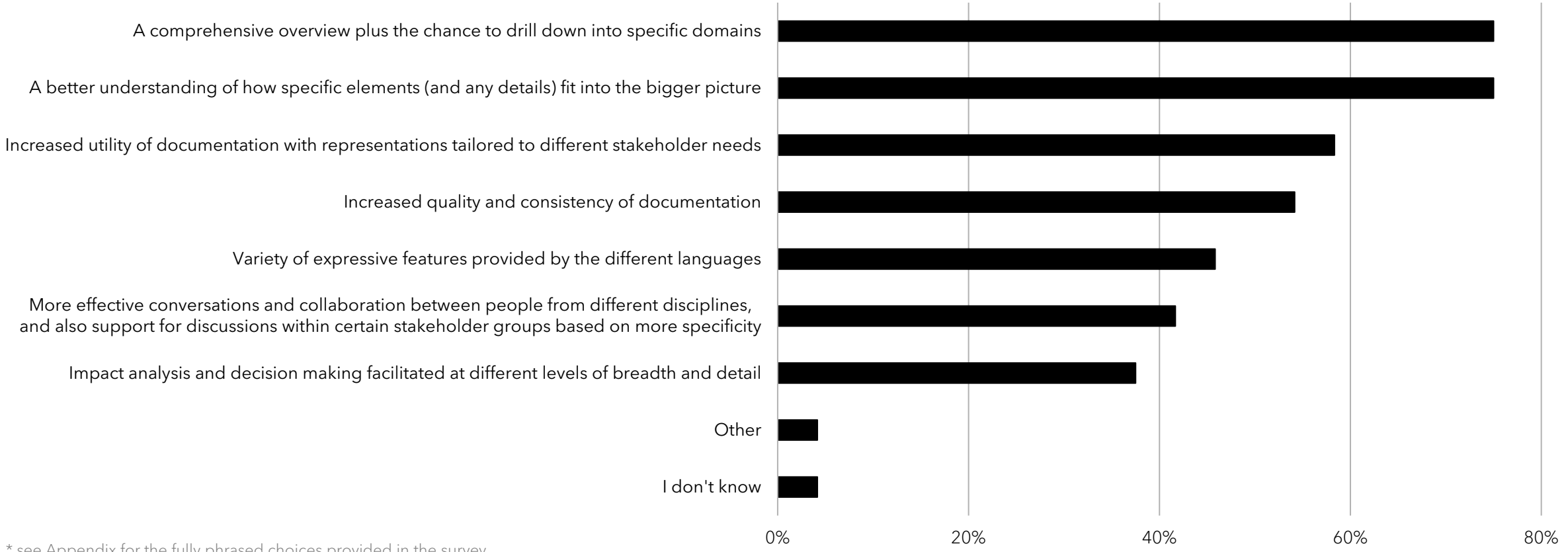
How do you combine the use of ArchiMate and BPMN/UML? *



* see Appendix for all choices provided in the survey

What benefits do you get from the combined use of ArchiMate and BPMN/UML?

– multiple choices possible – *

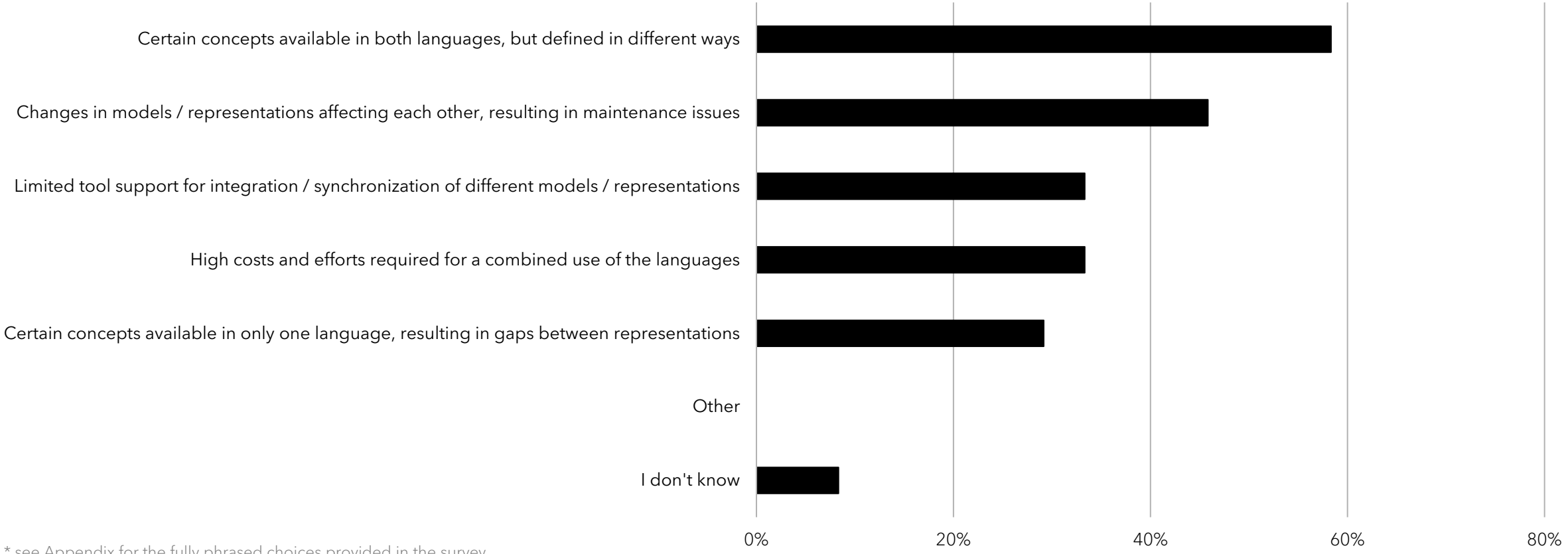


* see Appendix for the fully phrased choices provided in the survey

4.3.3 – ArchiMate with BPMN/UML | Challenges

What challenges do you encounter with the combined use of ArchiMate and BPMN/UML?

– multiple choices possible – *

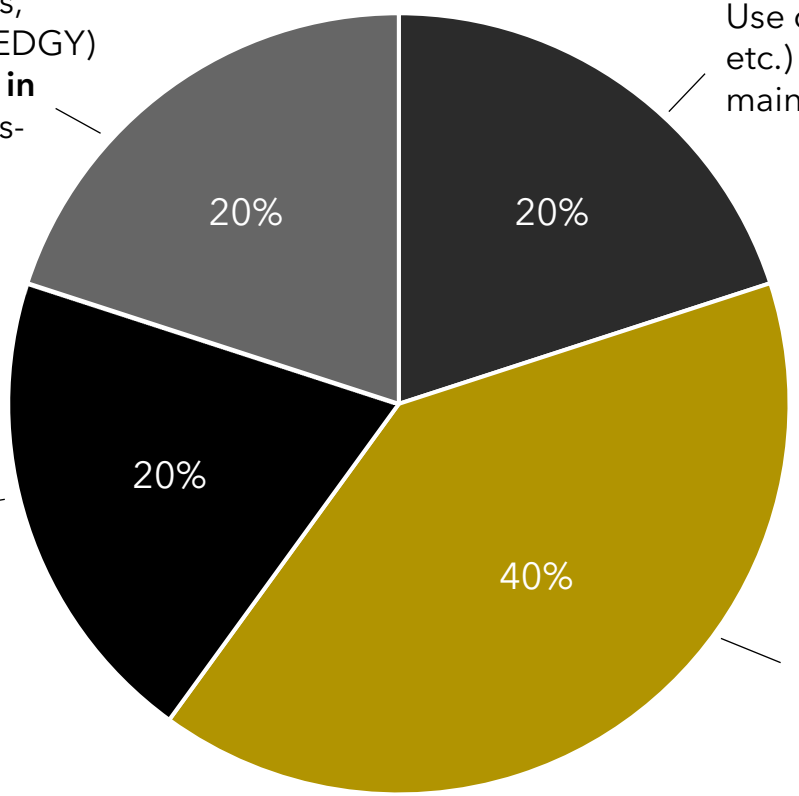


* see Appendix for the fully phrased choices provided in the survey

ACROSS AHEAD

How do you combine the use of EDGY and BPMN/UML? *

Use of representations / visualizations (maps, diagrams, etc.) in **only one language** (e.g., EDGY) **based on an underlying model maintained in another language** (e.g., BPMN/UML) as invisible backbone



Use of representations / visualizations (maps, diagrams, etc.) in different languages without any underlying model maintained in a repository ("**drawing only**")

Use of representations / visualizations (maps, diagrams, etc.) in different languages based on **separate models maintained in different repositories and integrated / synchronized with each other**

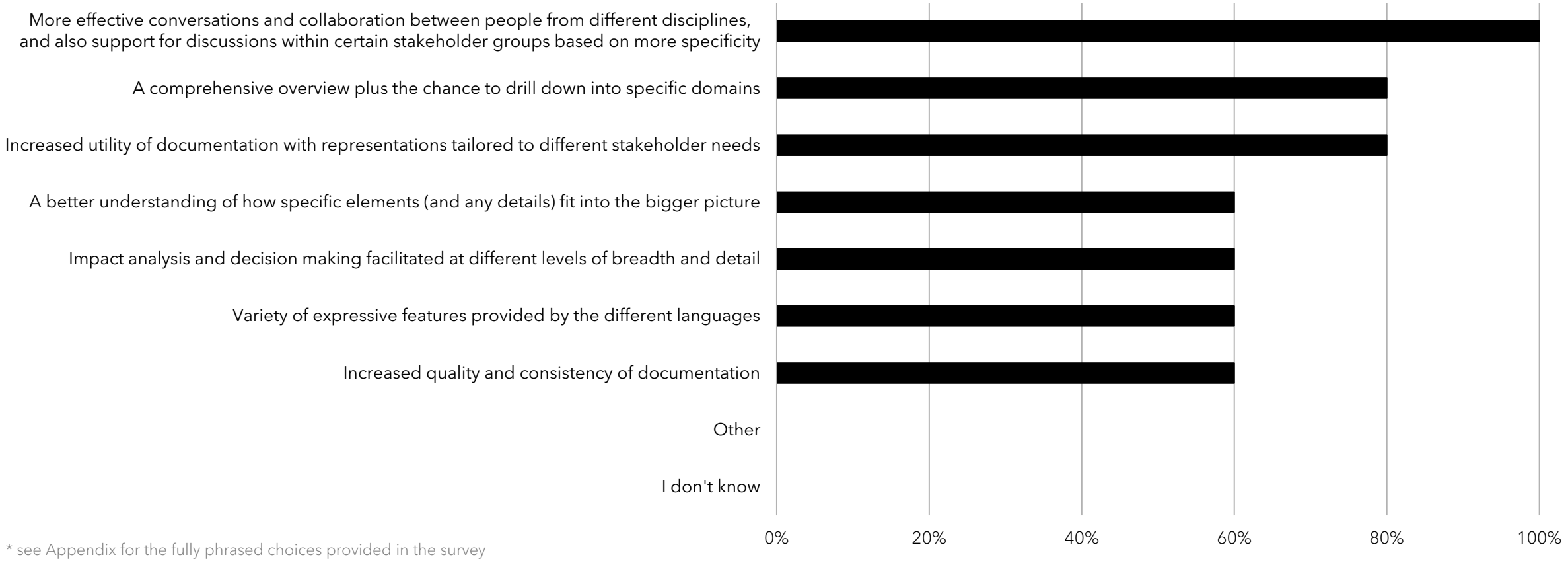
Use of representations / visualizations (maps, diagrams, etc.) in different languages based on **separate models maintained in different repositories** without any integration / synchronization

* see Appendix for all choices provided in the survey

4.4.2 – EDGY with BPMN/UML | Benefits

What benefits do you get from the combined use of EDGY and BPMN/UML?

– multiple choices possible – *

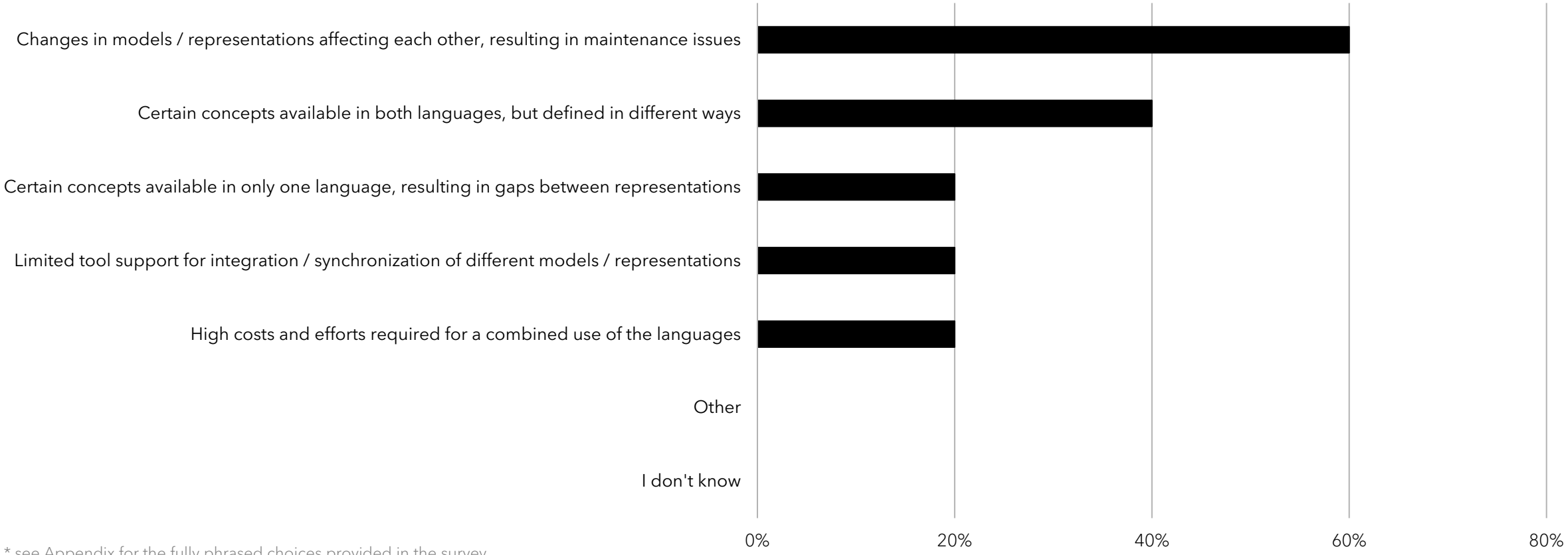


* see Appendix for the fully phrased choices provided in the survey

4.4.3 – EDGY with BPMN/UML | Challenges

What challenges do you encounter with the combined use of EDGY and BPMN/UML?

– multiple choices possible – *

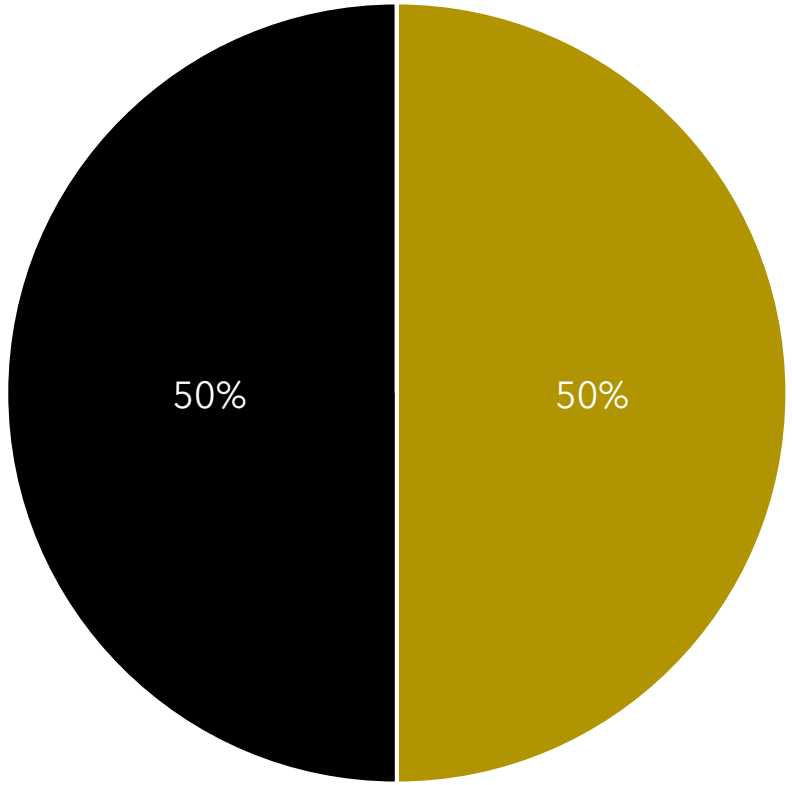


* see Appendix for the fully phrased choices provided in the survey

ACROSS AHEAD

How do you combine the use of EDGY and ArchiMate? *

Use of representations / visualizations (maps, diagrams, etc.) in different languages based on **separate models maintained in one and the same repository**



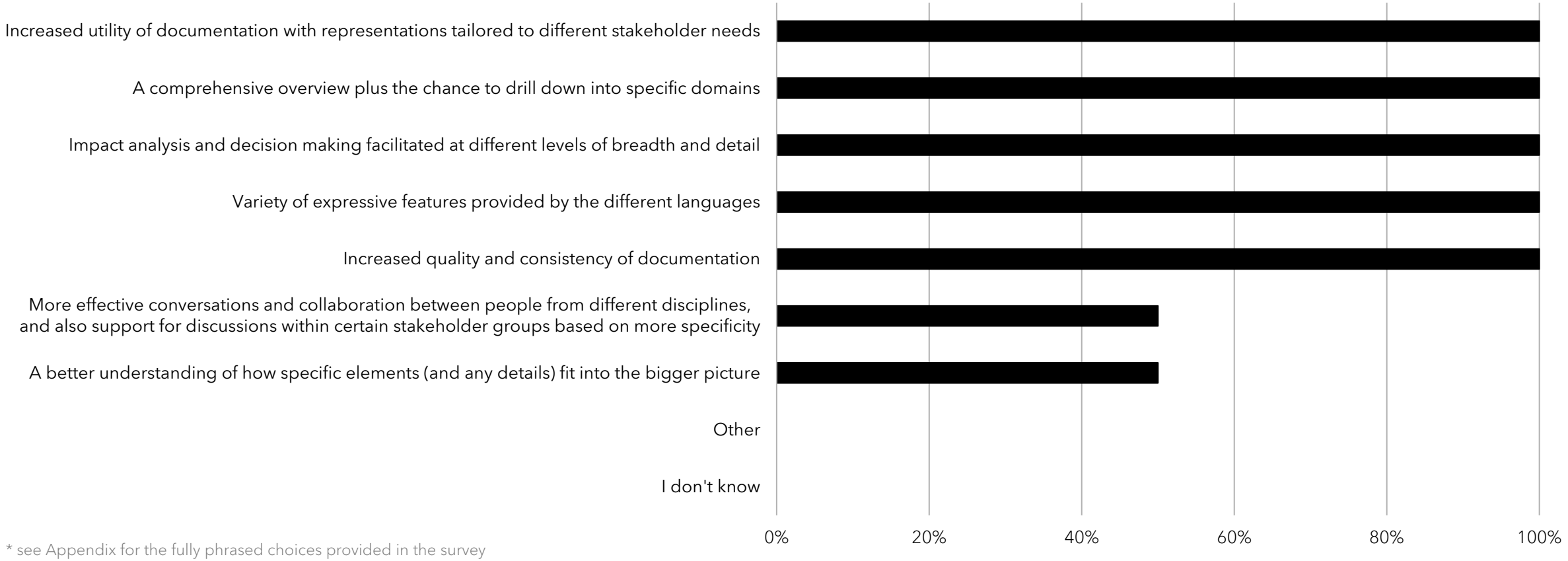
Use of representations / visualizations (maps, diagrams, etc.) in different languages without any underlying model maintained in a repository ("**drawing only**")

* see Appendix for all choices provided in the survey

4.5.2 – EDGY with ArchiMate | Benefits

What benefits do you get from the combined use of EDGY and ArchiMate?

– multiple choices possible – *

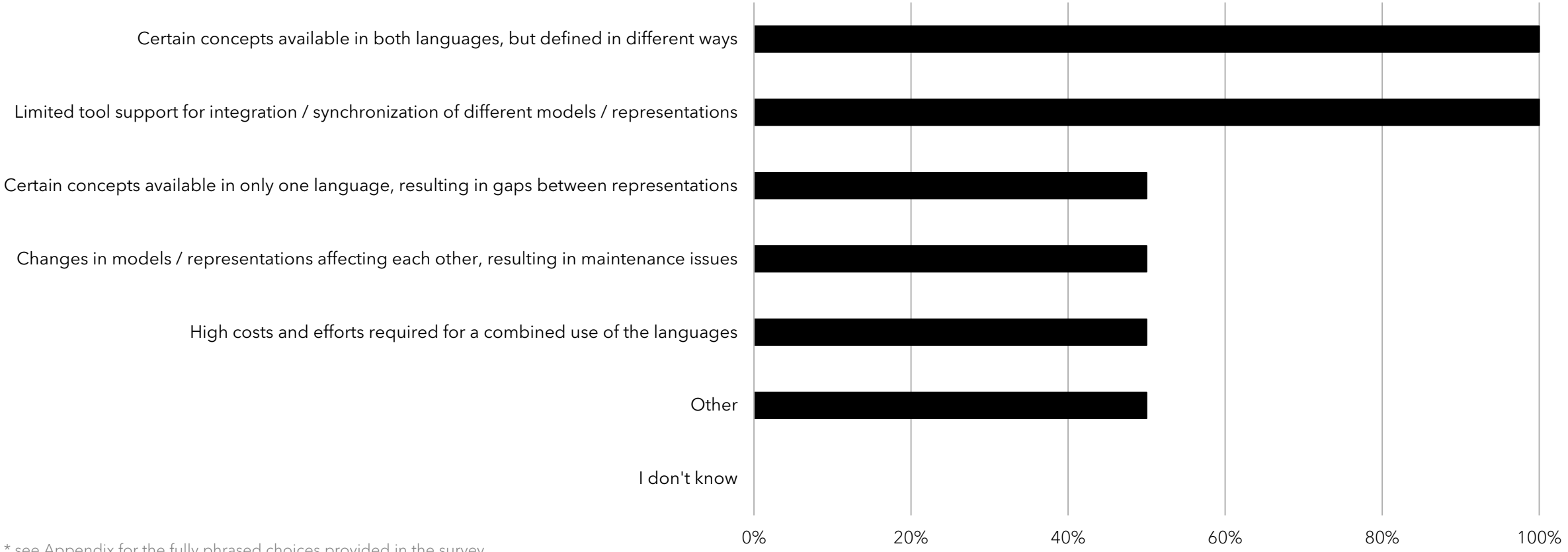


* see Appendix for the fully phrased choices provided in the survey

4.5.3 – EDGY with ArchiMate | Challenges

What challenges do you encounter with the combined use of EDGY and ArchiMate?

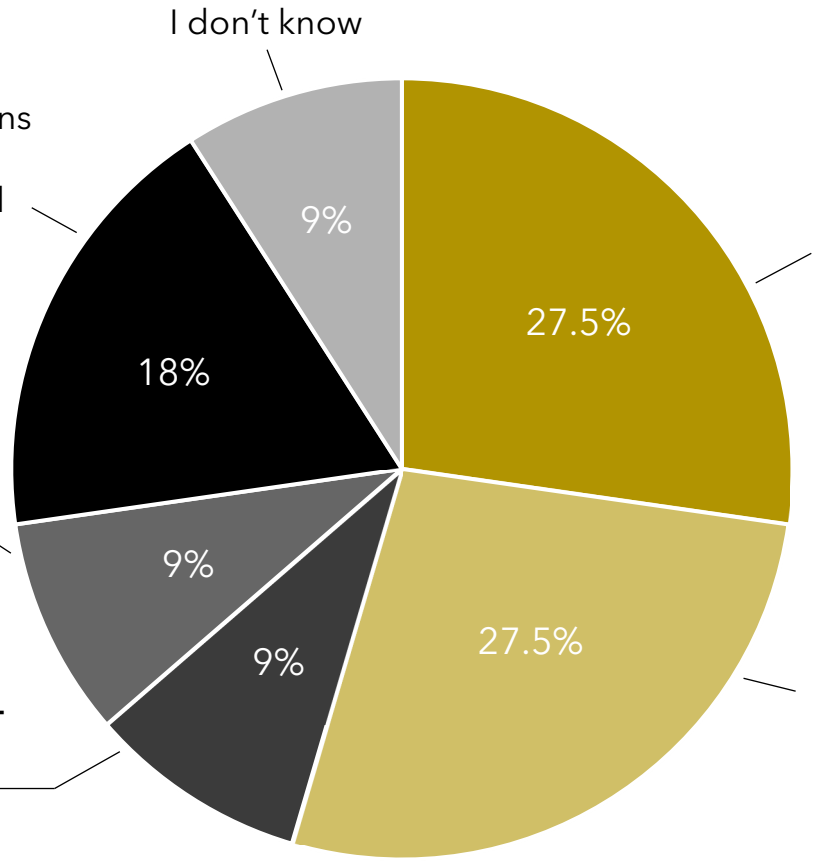
– multiple choices possible – *



* see Appendix for the fully phrased choices provided in the survey

ACROSS AHEAD

How do you combine the use of BPMN and UML? *

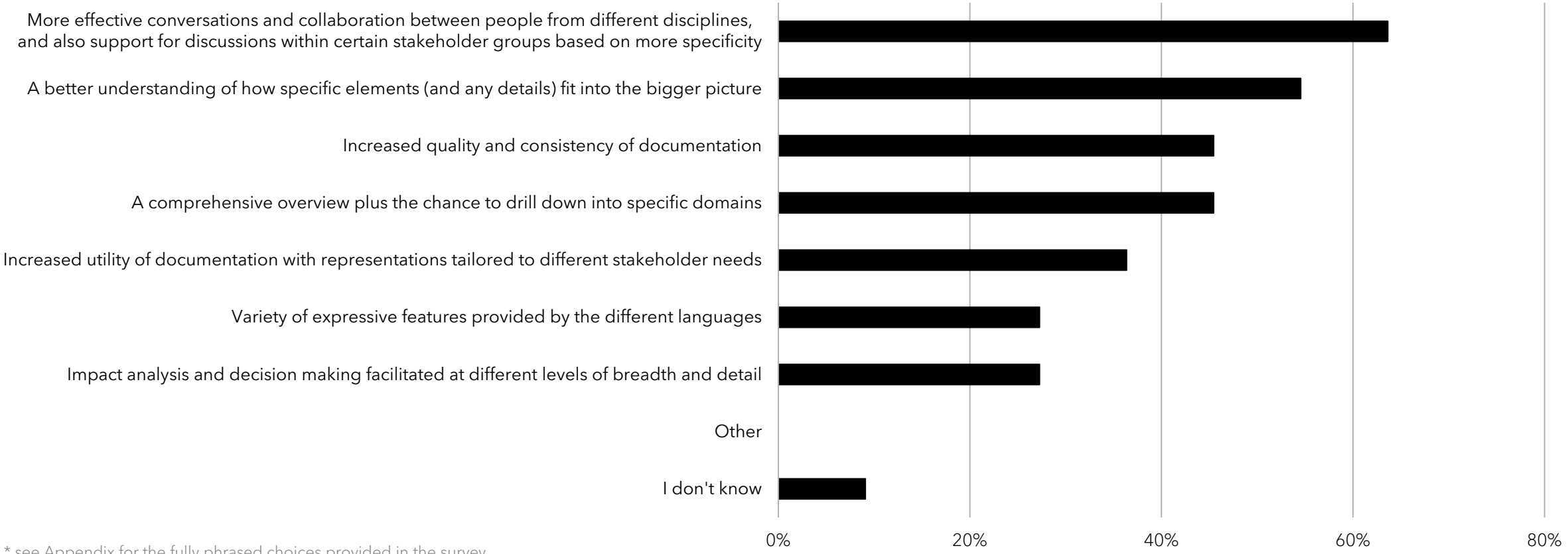


* see Appendix for all choices provided in the survey

4.6.2 – BPMN with UML | Benefits

What benefits do you get from the combined use of BPMN and UML?

– multiple choices possible – *

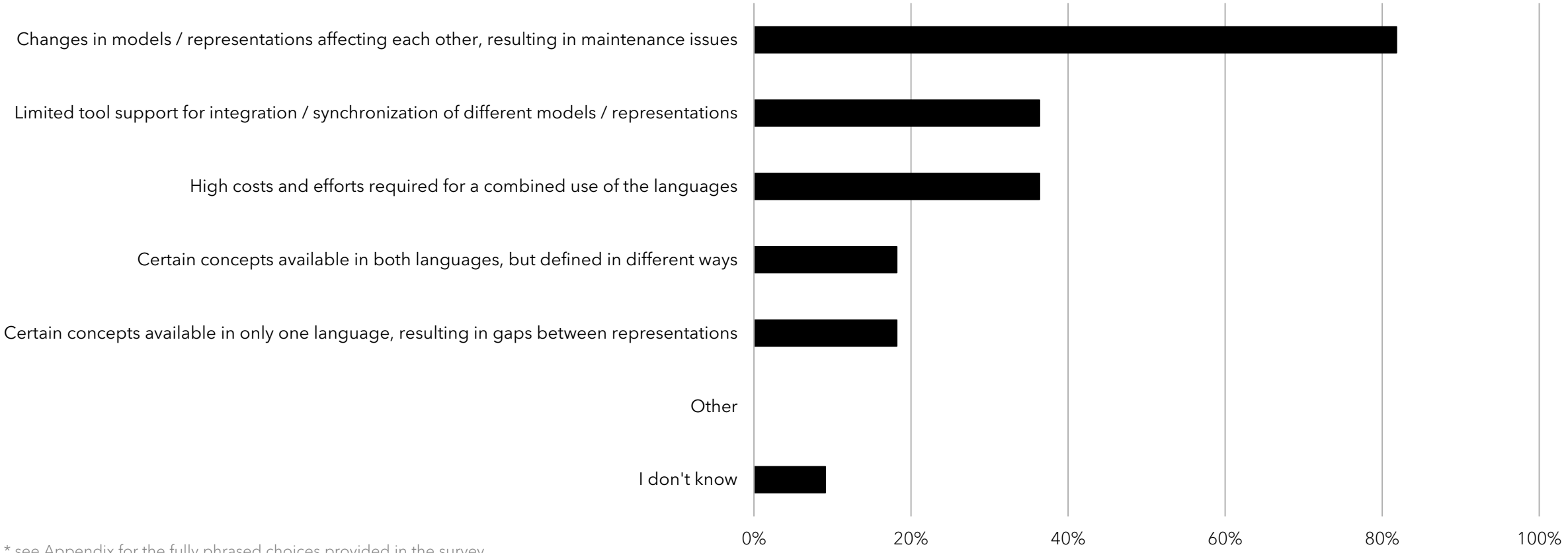


* see Appendix for the fully phrased choices provided in the survey

4.6.3 – BPMN with UML | Challenges

What challenges do you encounter with the combined use of BPMN and UML?

– multiple choices possible – *



* see Appendix for the fully phrased choices provided in the survey

Summary: Findings and Key Insights

ACROSS AHEAD

- Just over half of the organizations represented in the data set combine the use of different modeling languages in some way. Most common seems to be a combined use of ArchiMate with BPMN and / or UML.
- There are various reasons for organizations to combine the use of different languages, as represented by the benefits they get from a combined use. With ArchiMate and BPMN / UML, it's predominantly about (a.) having a comprehensive overview plus the chance to drill down into specific domains and (b.) creating a better understanding of how specific elements fit into the bigger picture.
- Organizations combine modeling languages in different ways. Interestingly, it's still a considerable number of organizations that seem to do so by (a.) using representations / visualizations (maps, diagrams, etc.) in different languages without any underlying model maintained in a repository ("drawing only") or by (b.) using representations / visualizations (maps, diagrams, etc.) in different languages based on separate models maintained in different repositories without any integration / synchronization.
- Organizations encounter various challenges with the combined use of different modeling languages. Among the top challenges with most language combinations employed in practice are (a.) the maintenance issues that come with changes in models / representations that affect each other and (b.) an impeded common understanding due to certain concepts (with the same name) being available in different languages, but not being defined in the same way.

ACROSS AHEAD

Get in touch for more insights.

ACROSS & AHEAD Advisory GmbH
Christophstr. 15-17
50670 Cologne
Germany

P +49 221 567 972 94

info@acrossandahead.com
www.acrossandahead.com

acrossandahead
@acrossandahead

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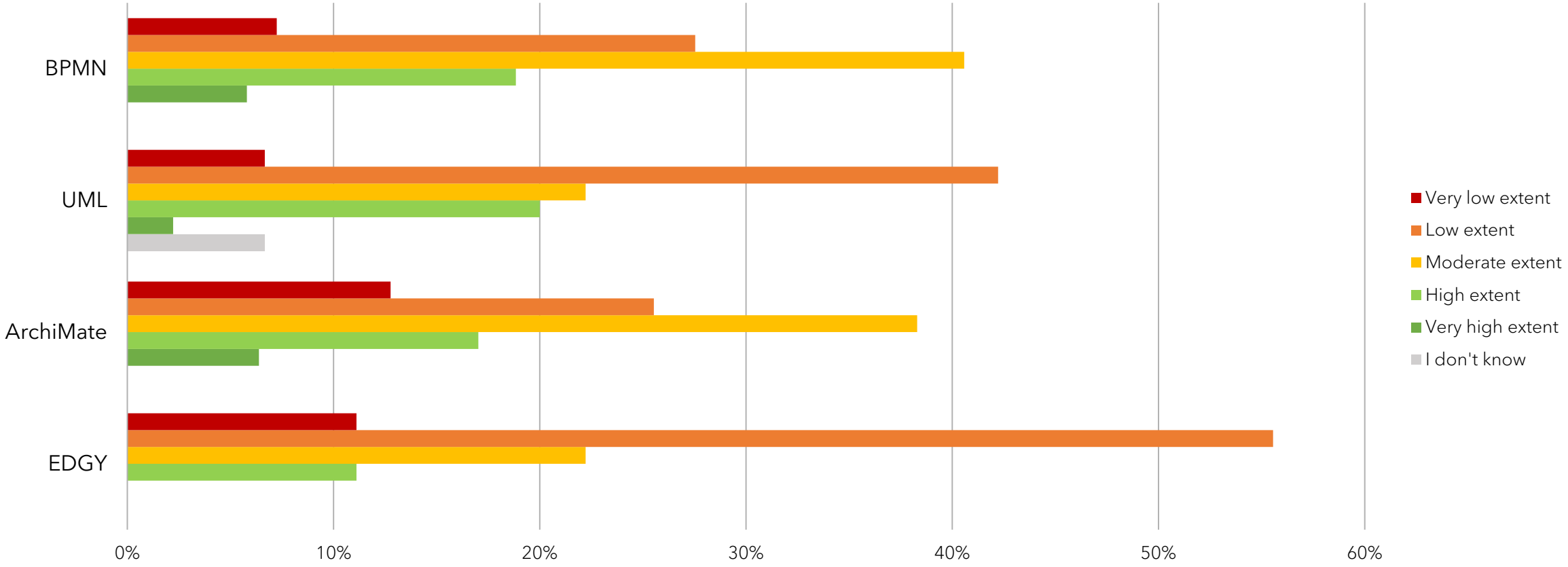
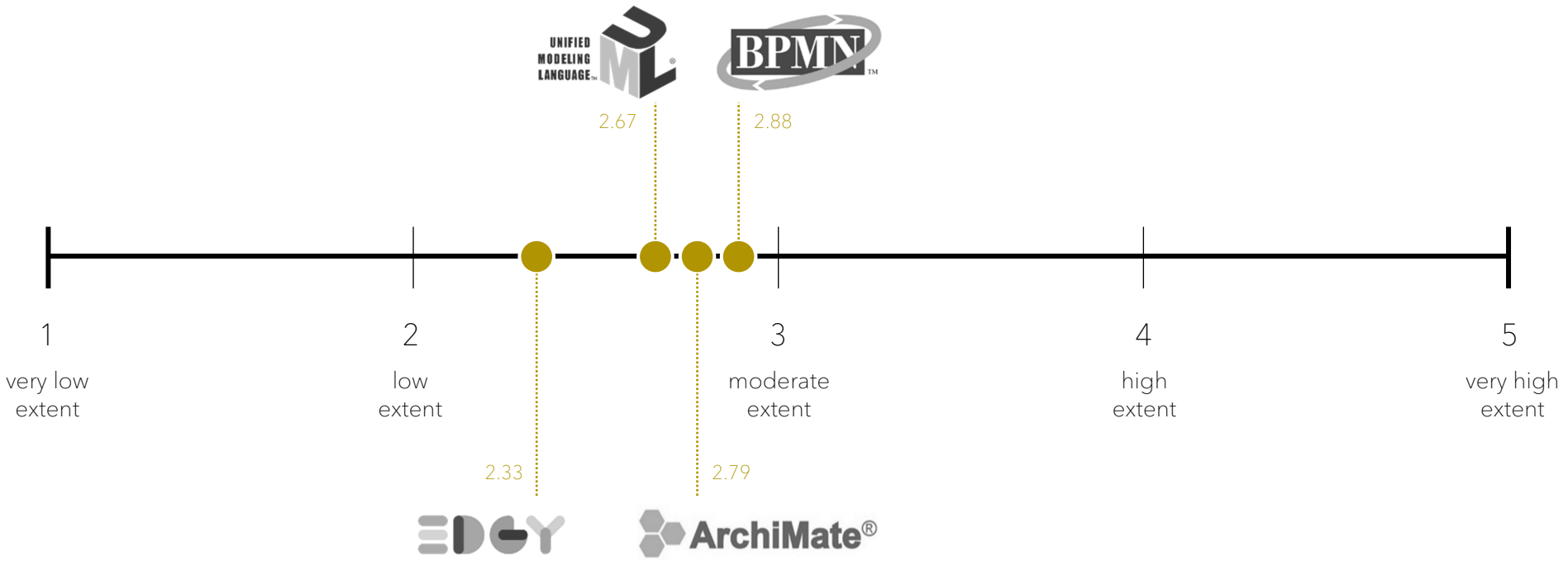
ACROSS AHEAD

To what extent is the <…> notation applied (and are <…> representations / visualizations created and used) in your organization?



Modeling Language Use | Usage Extent – Average Rating Chart

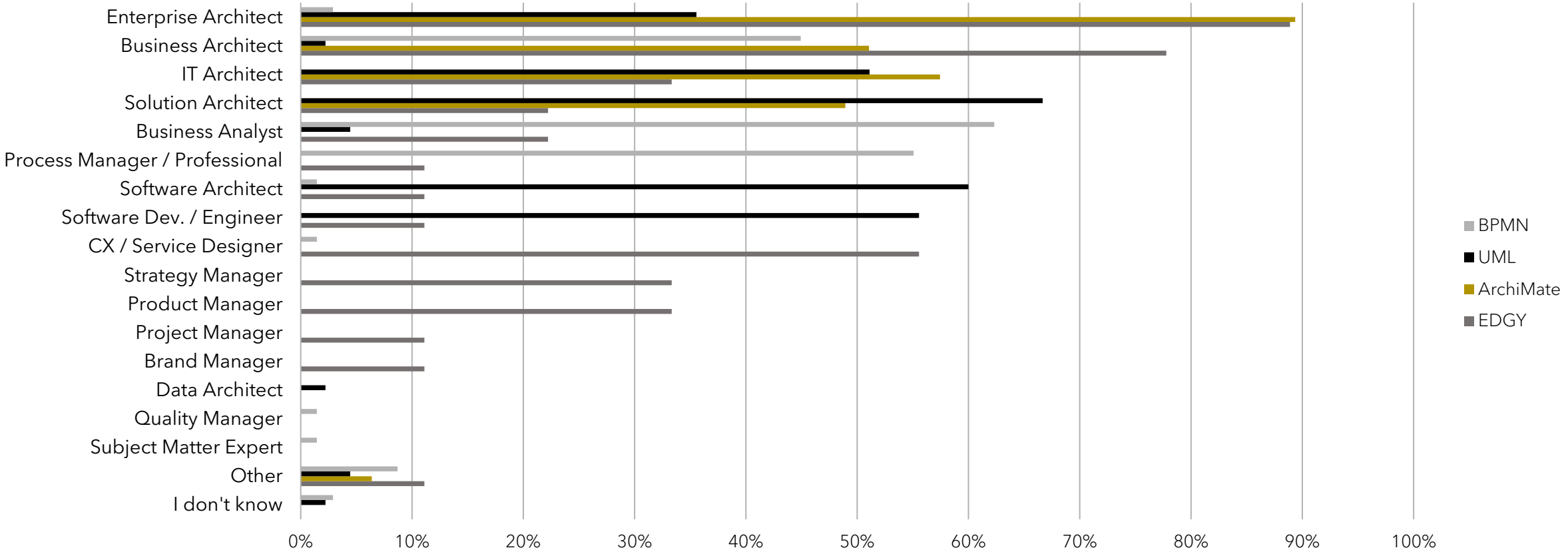
To what extent is the <…> notation applied (and are <…> representations / visualizations created and used) in your organization?



ACROSS AHEAD

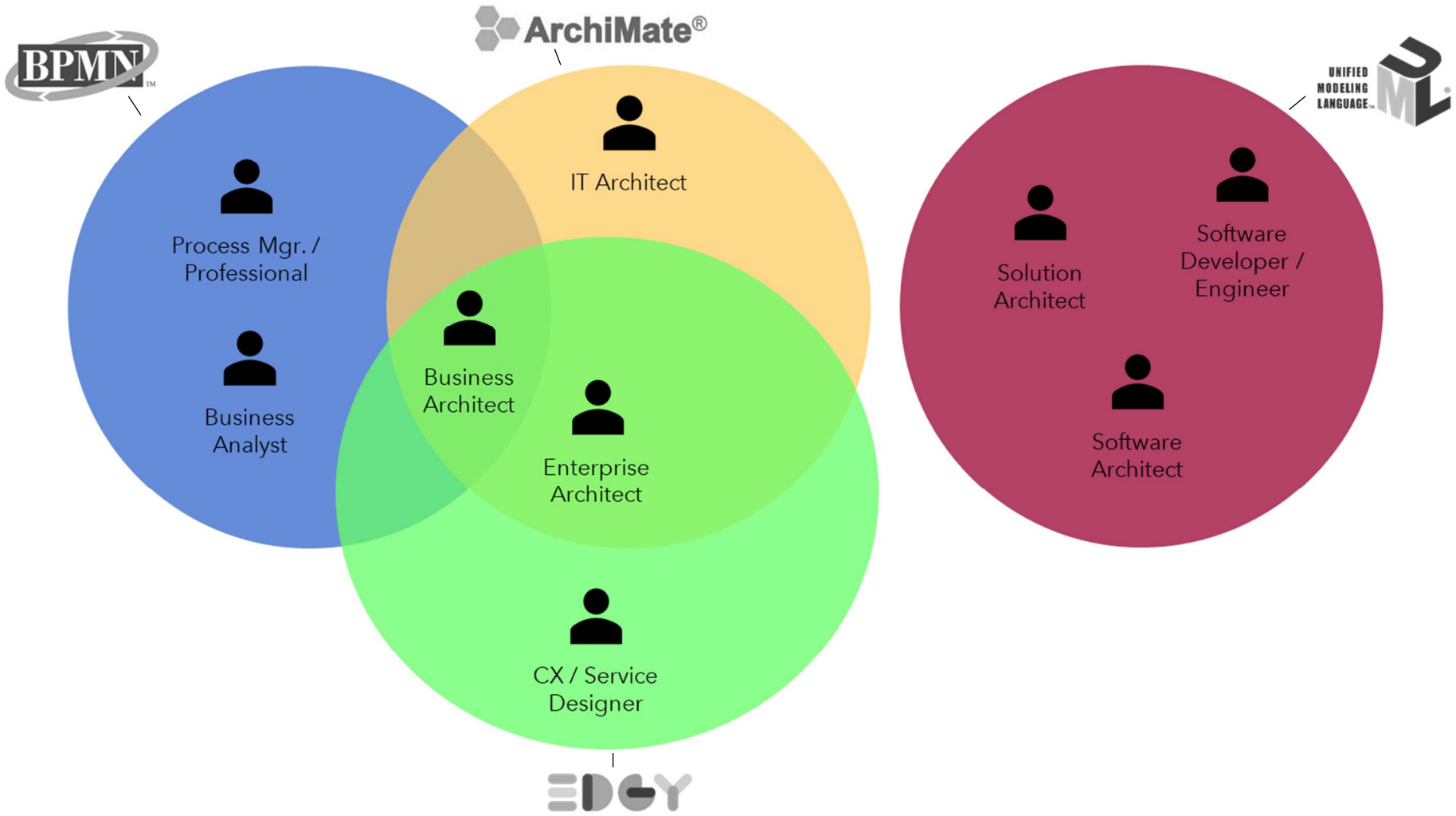
Which roles in your organization create <…> representations / visualizations?

– multiple choices possible –



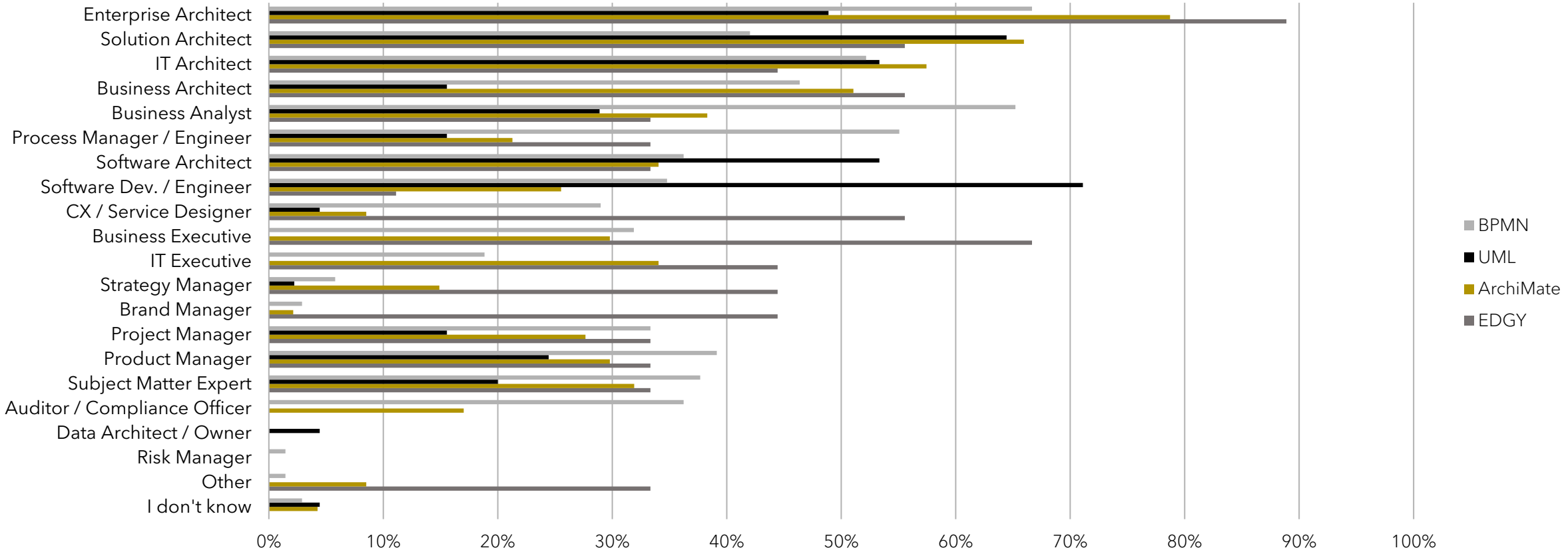
Modeling Language Use | Creators – Top Ranking Illustration

Top Three Creators per Language



Which roles in your organization are consumers of and make use of <…> representations / visualizations?

– multiple choices possible –

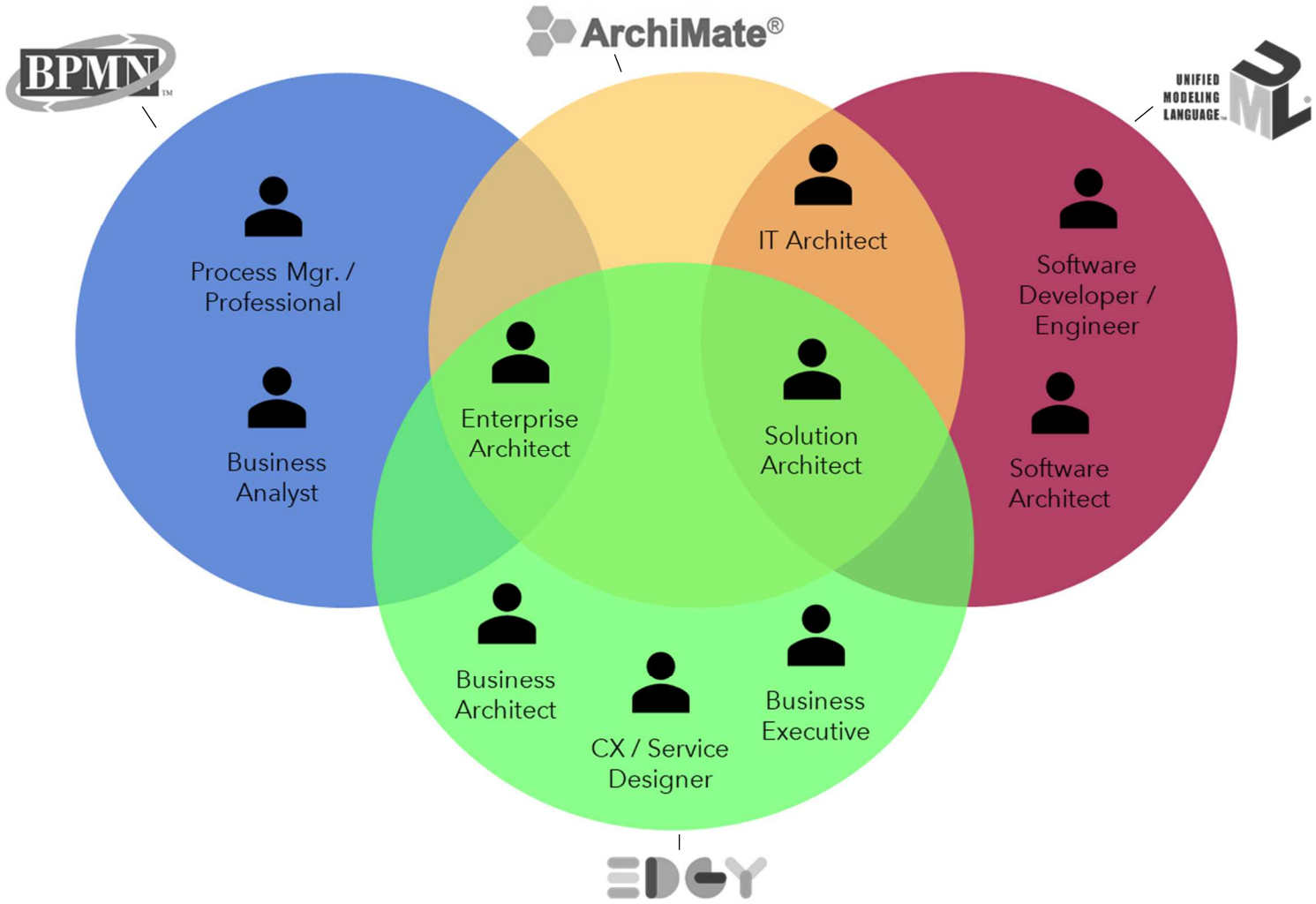


Modeling Language Use | Consumers – Top Ranking Illustration

ACROSS AHEAD

Top Three Consumers per Language

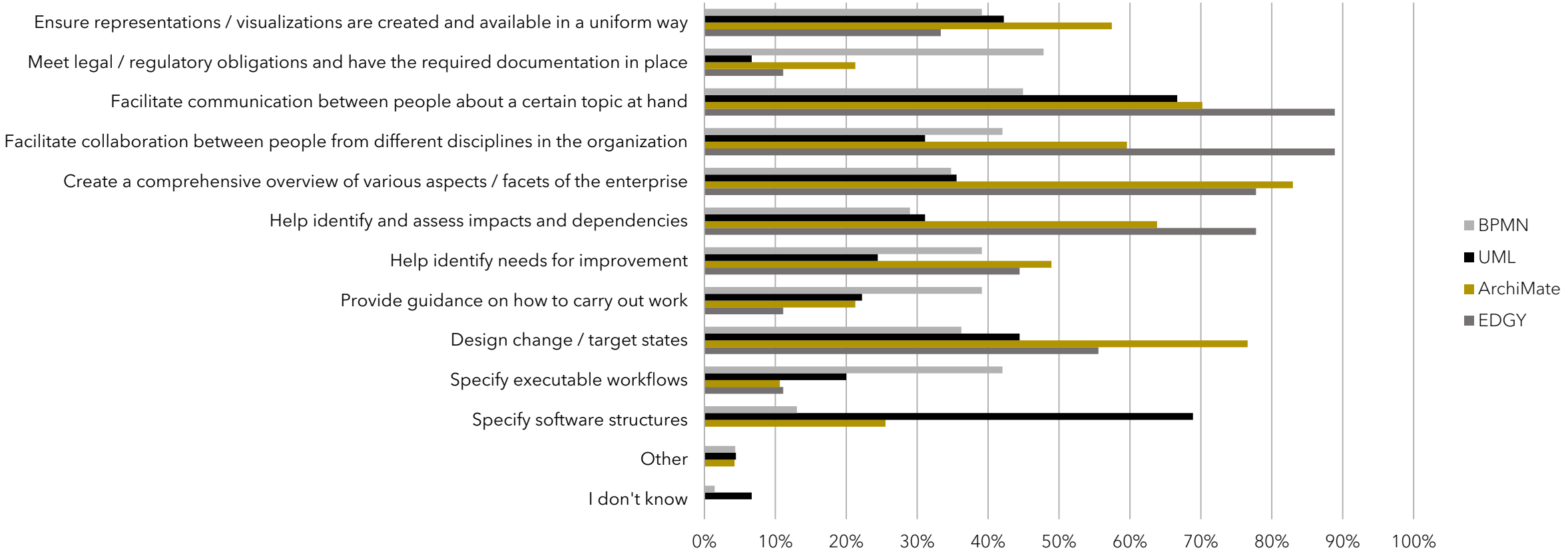
(more than three where third position is shared due to the same number of mentions)



Modeling Language Use | Main Purposes – Comparing Overview

What are the main purposes of using <…> at your organization?

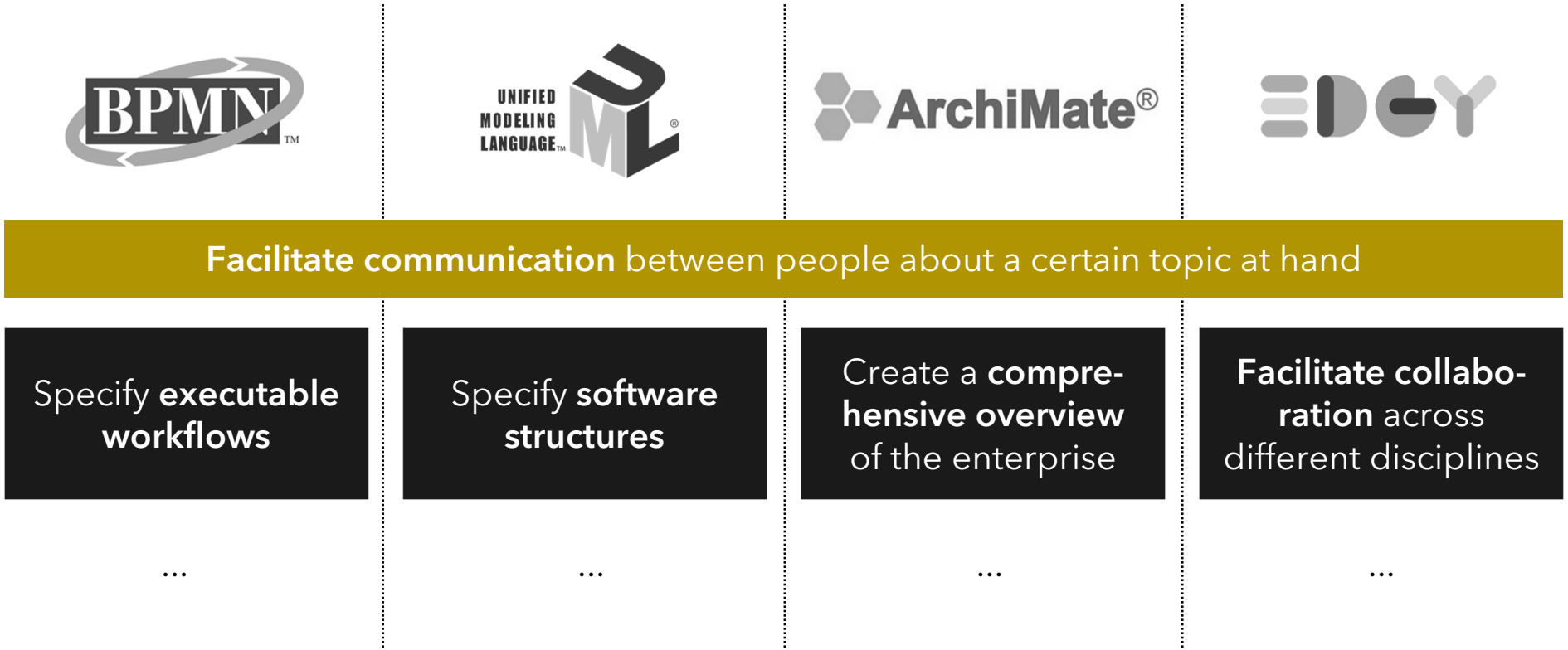
– multiple choices possible –



Modeling Language Use | Main Purposes – Top Ranking Illustration

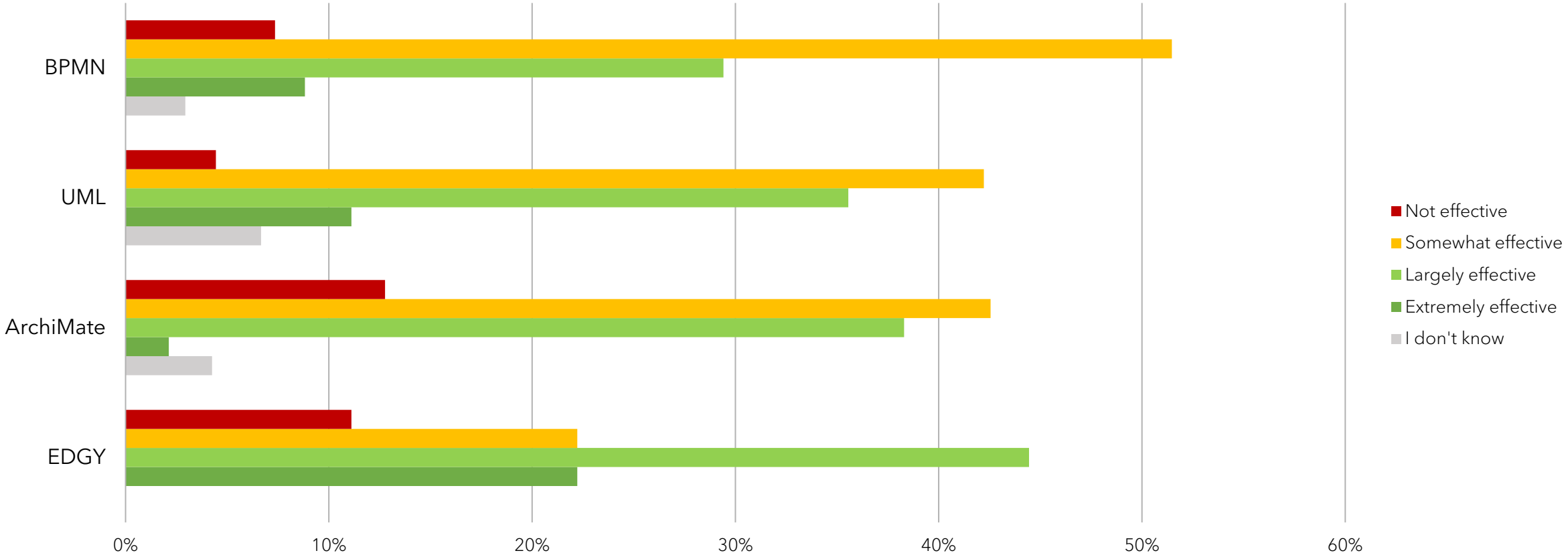
ACROSS AHEAD

What are the main purposes of using <…> at your organization?



Modeling Language Use | Effectiveness – Comparing Overview

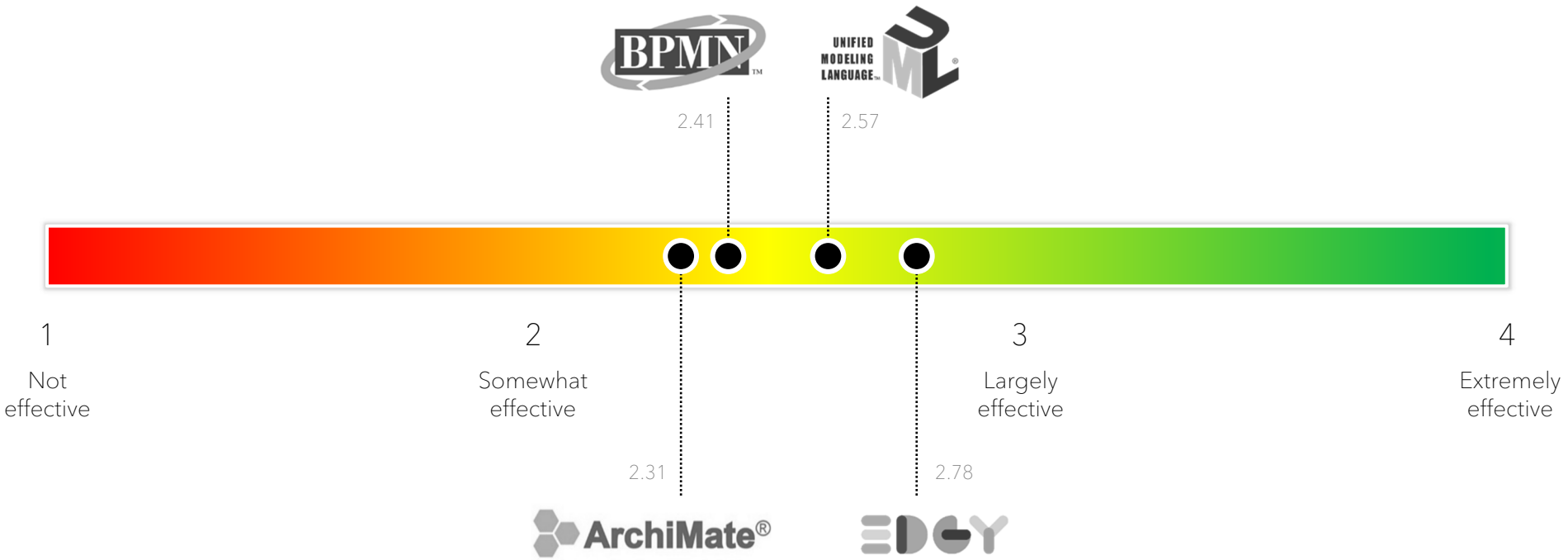
How effective is the use of <…> to serve the above purposes at your organization?



Modeling Language Use | Effectiveness – Average Rating Chart

ACROSS AHEAD

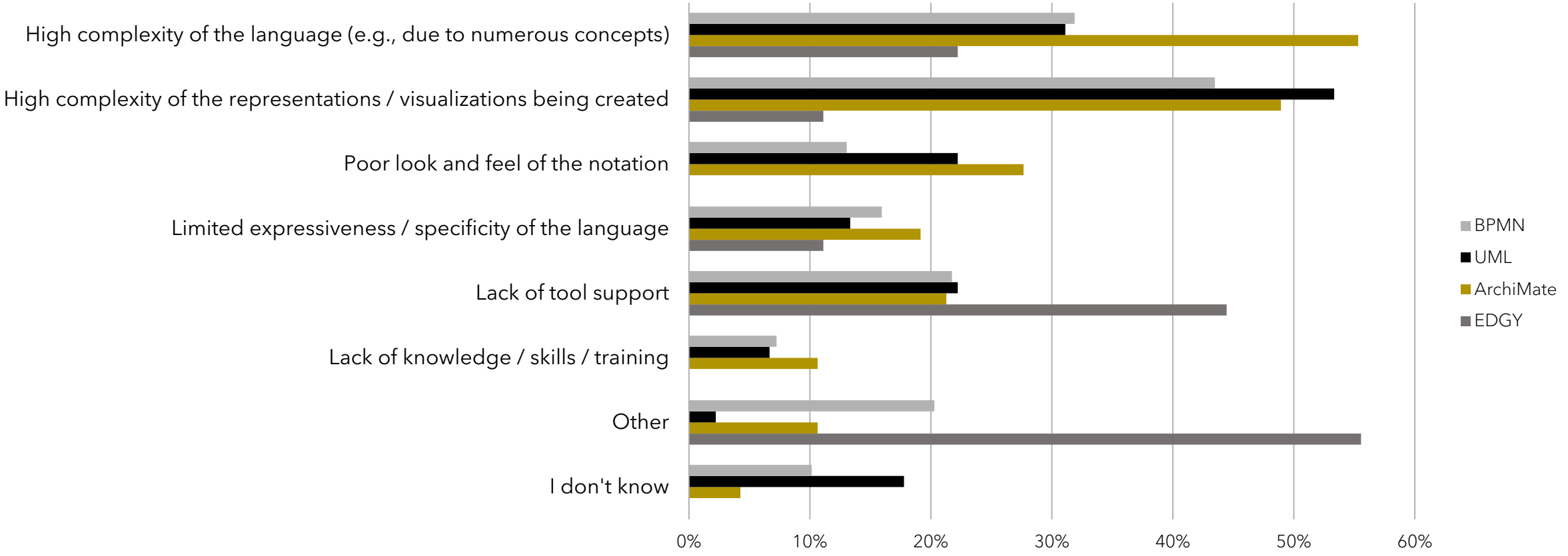
How effective is the use of <…> to serve the above purposes at your organization?



Modeling Language Use | Main Challenges – Comparing Overview

What are the main challenges in making effective use of <…> at your organization?

– multiple choices possible –



Modeling Language Use | Main Challenges – Top Ranking Illustration

What are the main challenges in making effective use of <…> at your organization?

BPMN	UML	ArchiMate®	EDOY
High complexity a) of the language (e.g., due to numerous concepts) and / or b) of the representations / visualizations being created			Lack of **tool support** and of **adoption** / understanding of the benefits
…	…	…	…

Questions 3.2.4 | 3.3.4 | 3.4.4 | 3.5.4:

What are the main purposes of using <..> at your organization?

- To ensure representations / visualizations are created and available in a uniform way
- To create a comprehensive overview of various aspects / facets of the enterprise
- To facilitate collaboration between people from different disciplines in the organization
- To meet legal / regulatory obligations and have the required documentation to serve as the basis for compliance assessments / audits
- To facilitate communication between people about a certain topic at hand
- To provide guidance on how to carry out work
- To help identify and assess impacts and dependencies
- To help identify needs for improvement
- To design change / target states
- To specify executable workflows
- To specify software structures
- Other: _____
- I don't know

Questions 3.2.6 | 3.3.6 | 3.4.6 | 3.5.6:

What are the main challenges in making effective use of <…> at your organization?

- High complexity of the language (e.g., due to numerous concepts), resulting in high entry barriers
- High complexity of the representations / visualizations being created, resulting in limited understanding among certain stakeholders
- Poor look and feel of the notation
- Limited expressiveness / specificity of the language
- Lack of tool support for the creation and maintenance of the representations / visualizations
- Other: _____
- I don't know

Questions 4.3.1 | 4.4.1 | 4.5.1 | 4.6.1:

How do you combine the use of <…> and <…>?

- Use of representations / visualizations (maps, diagrams, etc.) in different languages without any underlying model maintained in a repository ("drawing only")
- Use of representations / visualizations (maps, diagrams, etc.) in different languages based on separate models maintained in different repositories without any integration / synchronization
- Use of representations / visualizations (maps, diagrams, etc.) in different languages based on separate models maintained in different repositories and integrated / synchronized with each other
- Use of representations / visualizations (maps, diagrams, etc.) in different languages based on separate models maintained in one and the same repository
- Use of representations / visualizations (maps, diagrams, etc.) in different languages based on a single model maintained in one repository
- Use of representations / visualizations (maps, diagrams, etc.) in only one language (e.g., <...>) based on an underlying model maintained in another language (e.g., <…>) as invisible backbone
- Other: _____
- I don't know

Questions 4.3.2 | 4.4.2 | 4.5.2 | 4.6.2:

What benefits do you get from the combined use of <…> and <…>?

- Having a comprehensive overview ("big picture") of different aspects / elements of the organization incl. their dependencies as well as the chance to drill down into specific domains (such as, e.g., process domain, application domain, etc.)
- Facilitating a better understanding of how specific elements (e.g., process) and any details of them fit into the bigger picture
- Increased readability / utility of documentation through representations / visualizations being tailored to the needs of different stakeholders
- Having more effective conversations and collaboration between people from different disciplines in the organization, while also supporting discussions within a certain group of stakeholders based on more specificity being provided
- Facilitating impact analysis and decision making at different levels of breadth and detail
- Increased quality and consistency of documentation
- Leveraging the variety of expressive features provided by the different languages
- Other: _____
- I don't know

Questions 4.3.3 | 4.4.3 | 4.5.3 | 4.6.3:

What challenges do you encounter with the combined use of <…> and <…>?

- Certain concepts (with the same name) available in both languages, but defined in different ways, impeding a common understanding
- Certain concepts available in one language, but not in the other language, resulting in gaps between different representations / visualizations
- Changes in different models / representations affecting each other, resulting in maintenance issues
- Limited tool support for integration / synchronization of different models / representations
- High costs and efforts required for a combined use of the languages
- Other: _____
- I don't know