

# Bridge owner needs for digital twins

## IABMAS Working Group Survey

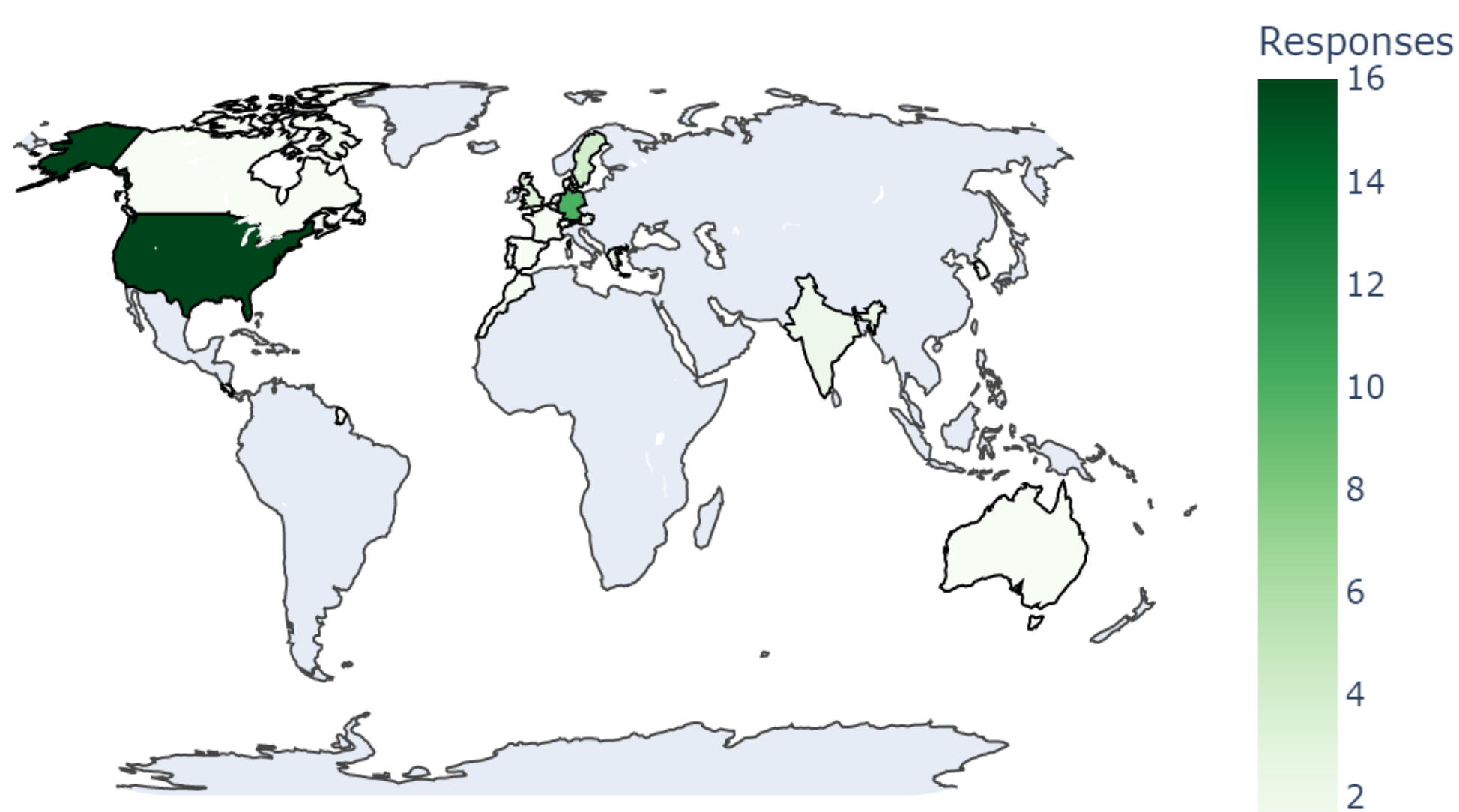
Eva Lantsoght and Sreenivas Alampalli – on behalf of the IABMAS Working Group on Digital Twins

### Introduction

- **IABMAS Working Group on Digital Twins:** IABMAS Bridge TCs (Load Testing, BHM, and Bridge Management) identified Digital Twins as an important common topic of study for enhancing bridge safety and management. Conducted a survey to identify topics for a planned future workshop.
- Survey objective: map **needs of bridge owners** for bridge management and perception regarding digital twins

### Methods

- Survey on Qualtrics platform
- Filtered responses: **55 bridge owners** from 19 countries

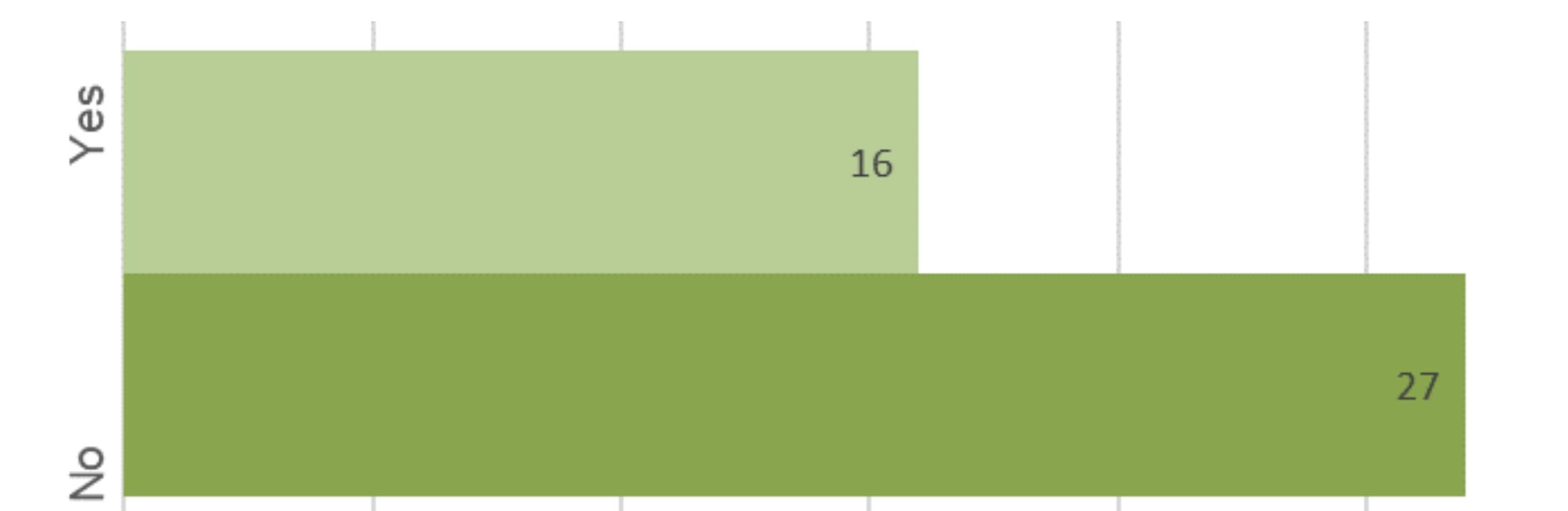


### Results – Adoption of digital twins

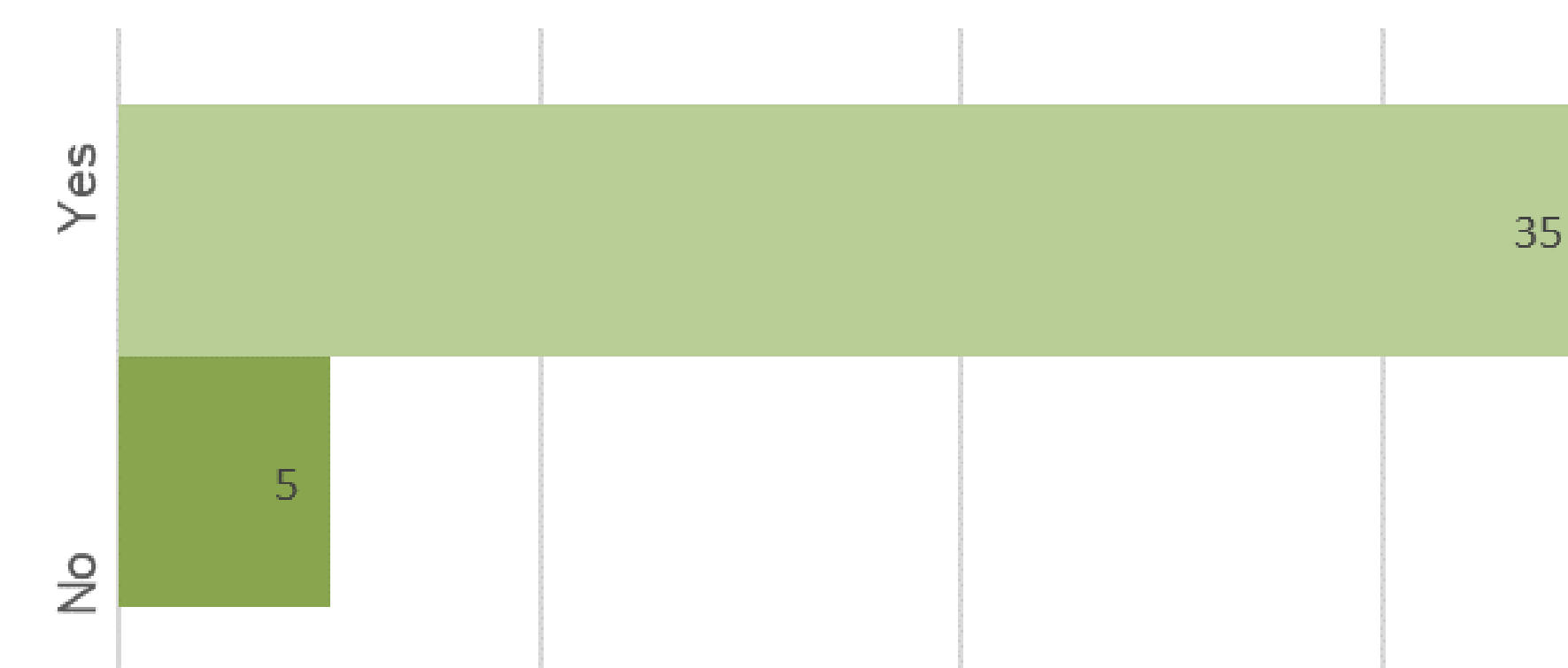
Question: Are you using BIM/BrIM tools in your bridge management?



Question: Are you currently using any form of **digital twin** technology?

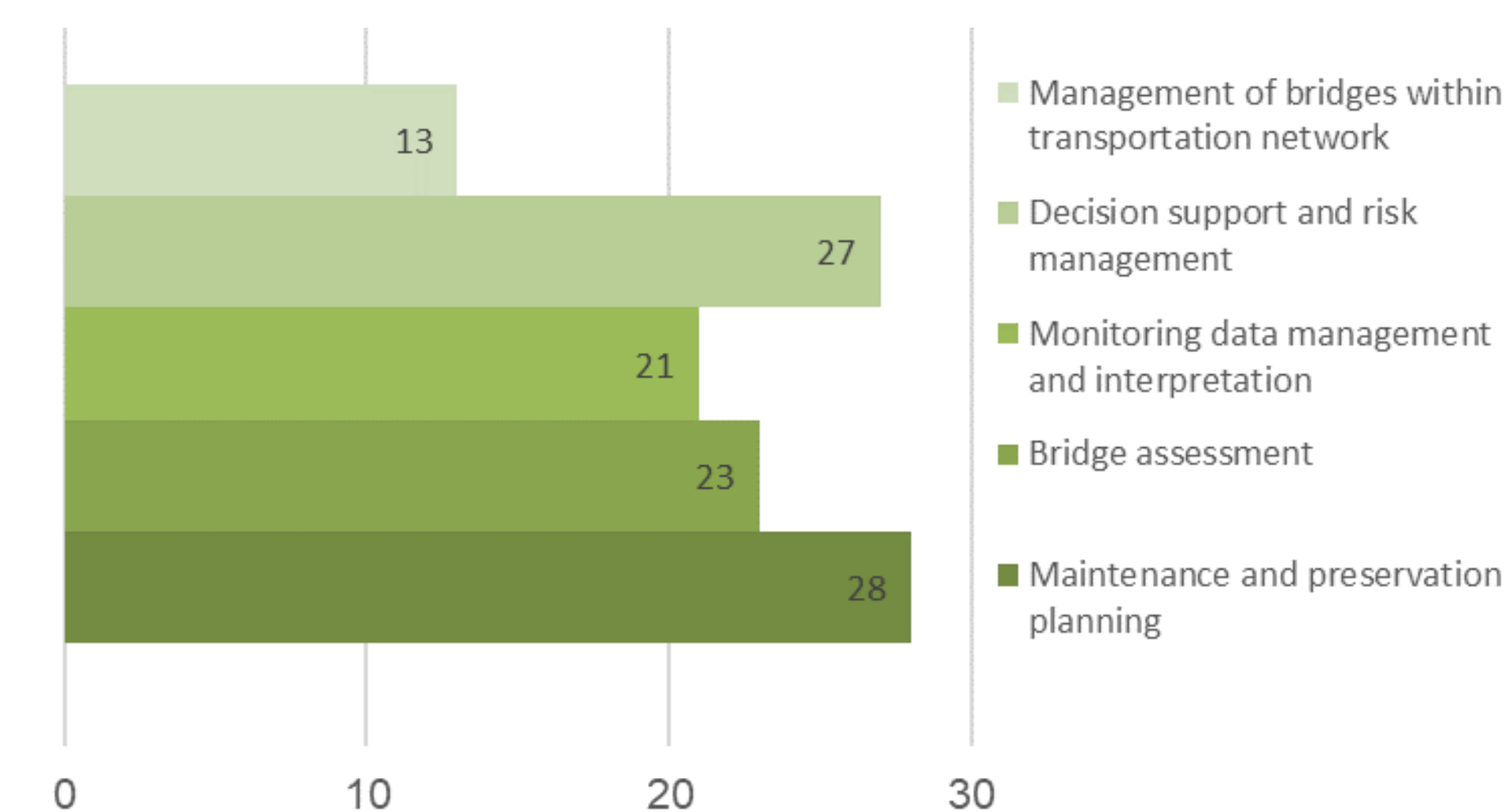


Question: Are you currently interested in **exploring digital twin technology** for bridge management at the asset level?

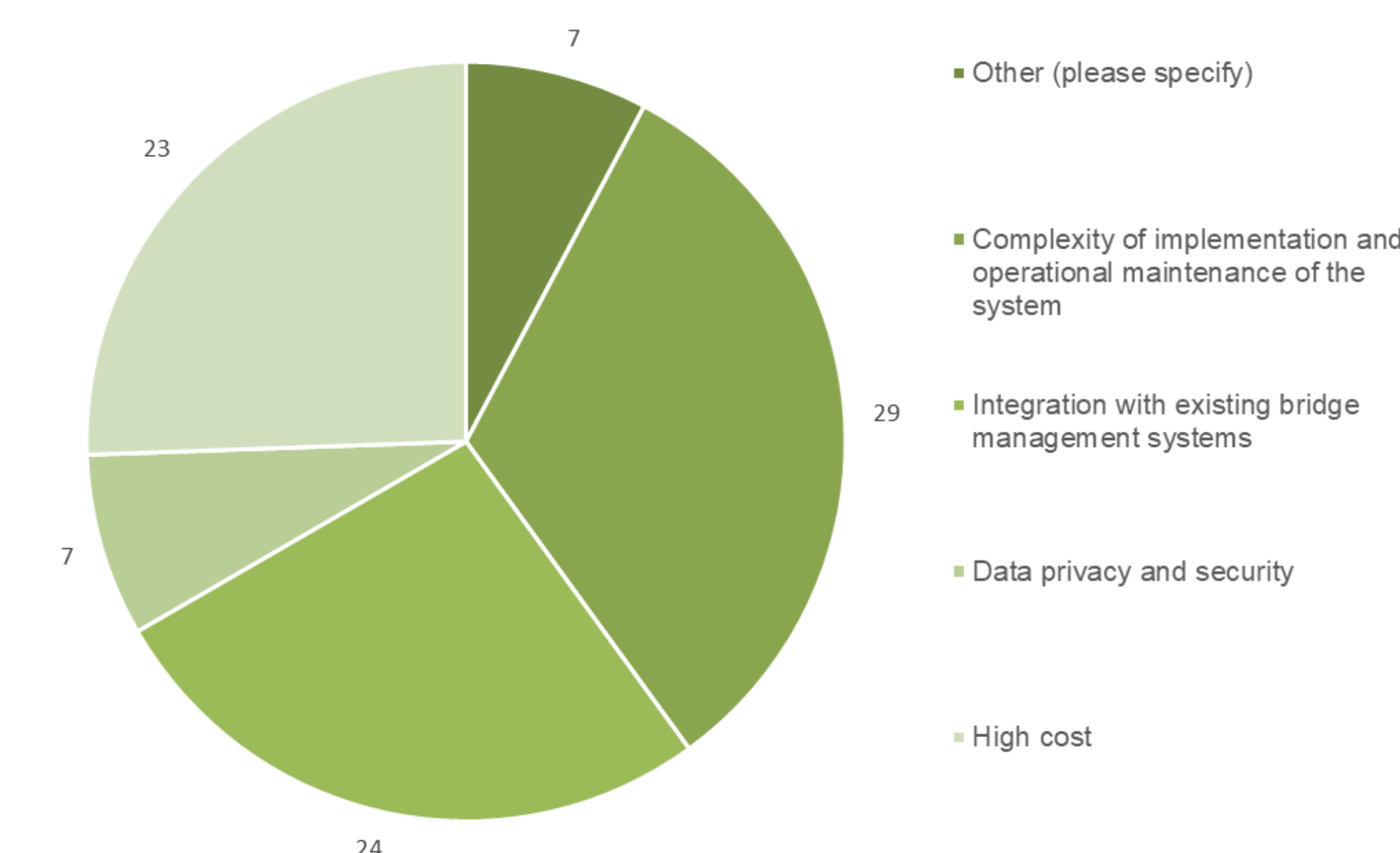


### Results – Bridge owner needs

Question: What are your current **challenges** in bridge management?



Question: What are your biggest **concerns** about using digital twin technology?



**Other concerns:** resources and funding, gathering data to make model useful, data size, purging old data versus retaining data, different types necessary as function of different bridge types, use and value of data, human factor

### Discussion

- Many different **definitions** and understanding of digital twins for bridge Management
- **Limited adoption**, mostly for new bridges, large interest from bridge owners
- Digital twins considered as **potential solution** for bridge management challenges, but owners have concerns
- Less interest for **network-level** approach

### Conclusions

- Need for **uniform definitions** for digital twins in bridge management, and identifying inputs and outputs
- Owners interested in **case studies**
- IABMAS Working Group on digital twins to develop **white paper and workshop** at IABMAS 2026 (<https://iabmas2026.org/>)