

The Impact of Technology Adoption on Scottish Social Enterprises' Operation

The research is conducted

By **Han-Ju (Emma) Yang**, the doctoral researcher at the University of Edinburgh Business School with the support of the following intermediary organisations: *Social Enterprise Scotland, Scottish Tech Army, Community Enterprise, Firstport, Social Enterprise Academy, Community Enterprise in Scotland, Inspiring Scotland*

For any further inquiries, please get in touch via email: Han-Ju.Yang@ed.ac.uk



- 1. Introduction**
- 2. Executive Summary**
- 3. Key Figures**
- 4. Full Survey Results**

1. Introduction

Project Background

More than 50% of social enterprises (SEs) in the UK have adopted technology to innovate their products and services. However, there remains a limited understanding of the individual experiences of SEs in technology adoption.

This report systematically explores the opportunities and barriers that SEs encounter when engaging with technologies. Specifically, it provides an overview of SE practitioners' interactions with technology in the Scottish context to initiate a conversation on the impact of technology adoption on SEs.

Method

The findings presented in this report are derived from an online survey conducted from September 1st to October 31st, 2022. The survey was structured into three sections:

- SEs' mission orientation
- SEs' technology adoption experiences, including types, considerations, and challenges
- SEs' organisational profiles, including turnover, years in operation, and fields of operation

A total of **113 responses** were received, and **53 usable entries** were identified for analysis using IBM SPSS 27. Based on these 53 responses, the subsequent findings provide insights into the experiences of SEs during the years **2021 and 2022**.



1. Introduction
- 2. Executive Summary**
3. Key Figures
4. Full Survey Results

2. Executive Summary (1/2)

Key Findings

Technology adoption has become increasingly common within Scottish social enterprises. Technology is vital for SEs' operations in terms of **enhancing internal operations, improving service delivery, and strengthening communication with external partners**. This heightened focus on technology aligns seamlessly with the Scottish government's strategy, aiming to keep social enterprises more transparent and connected.

Specifically, three trends were observed in SEs' technology adoption in the report:

- 1. The rate of technology adoption varies according to SEs' mission orientations.** It turns out that more business-oriented social enterprises exhibit a stronger inclination toward adopting technology, with a 92% adoption rate, in contrast to the 61% adoption rate observed among more social-oriented social enterprises.
- 2. The choice of technology differs based on the annual turnover of social enterprises.** The low entry cost makes online platforms easy to adopt when SEs' annual turnover is less than 100K. As SEs grow in scale, they upgrade their technology adoption to admin infrastructure when reaching an annual turnover between 100K to 500K. Once the annual turnover grows to more than 500K, the operational systems are adopted. This trend showcases that SEs' technology adoption is in response to evolving organisational needs as they grow.
- 3. The majority of social enterprises (67%) embark on technology adoption alone,** and 55% of SEs obtain technology-related info from technology providers.

2. Executive Summary (2/2)

Recommendations

Technology adoption is a collective capability developed by the entire social enterprise field. Thus, the collaboration between SEs and intermediary organisations is crucial to experimenting with and learning from the best practices that can unleash the potential technology adoption.

For SE practitioners:

Three recommendations are highlighted for SEs considering technology adoption:

1. Draw insights **from the experiences of other similar social enterprises** when sorting for potential technology options.
2. Start with **readily available off-the-shelf technology** solutions if the organisational needs are still evolving.
3. **Consult intermediary organisations** regarding suggestions for potential technology solutions.

For Intermediary Organisations:

Three directions are identified for intermediary organisations to enhance the support for SEs:

1. **Function as knowledge hubs** for SEs to exchange insights and practical examples.
2. **Facilitate connections** among SEs with similar technological needs, providing successful case studies for learning.
3. **Intervene** when challenges arise in the technology adoption process.



1. Introduction
2. Executive Summary
- 3. Key Figures**
4. Full Survey Results

3. Key Figures (1/4)

Mission Orientation & Technology Adoption

68%

of SEs reported that they have adopted new technologies during the years 2021 and 2022.

Business-oriented SEs are more inclined to adopt technology:

92% vs **61%**
(business-oriented) (social-oriented)

Among the SEs who adopted technologies, the top three new technologies adopted are:

36% Operational Systems
(e.g. payment software, inventory systems)

25% Online Platforms
(e.g. organisation websites, fundraising websites)

22% Admin Infrastructure
(e.g. email, Microsoft Office 365, Online meeting apps)

3. Key Figures (2/4)

Technology Adoption Experiences

67%

of SEs indicated that they work alone, without engaging with external parties when adopting new technologies.

55%

of SEs obtained information directly from technology providers, while only 7% relied on intermediary organisations when seeking advice on technology adoption.

The type of technology adopted differs according to SEs' annual turnover.

100K and below: Online Platforms

100K-500K: Admin Infrastructure

500K-1M: Operational Systems

3. Key Figures (3/4)

Technology Adoption Considerations

The top three considerations when SEs seek technology adoption are:

1. Financial Costs

(one-time expense or subscription)

2. Technological Functions

(wide-coverage or specific)

3. Design of Technologies

(off-the-shelf or customised design)

The top three impediments to technology adoption are:

1. Financial Constraints

2. Time-Consuming

3. Shortage in Staff

3. Key Figures (4/4)

47%

A high percentage of SEs have operated for more than ten years.

49%

Nearly half of the SEs have an annual turnover of under 100K.

The top three fields that SE respondents operate in are:

24% Education, Training & Employment

13% The Arts/Creative Industry

11% Health and Social Care

Organisational Profiles

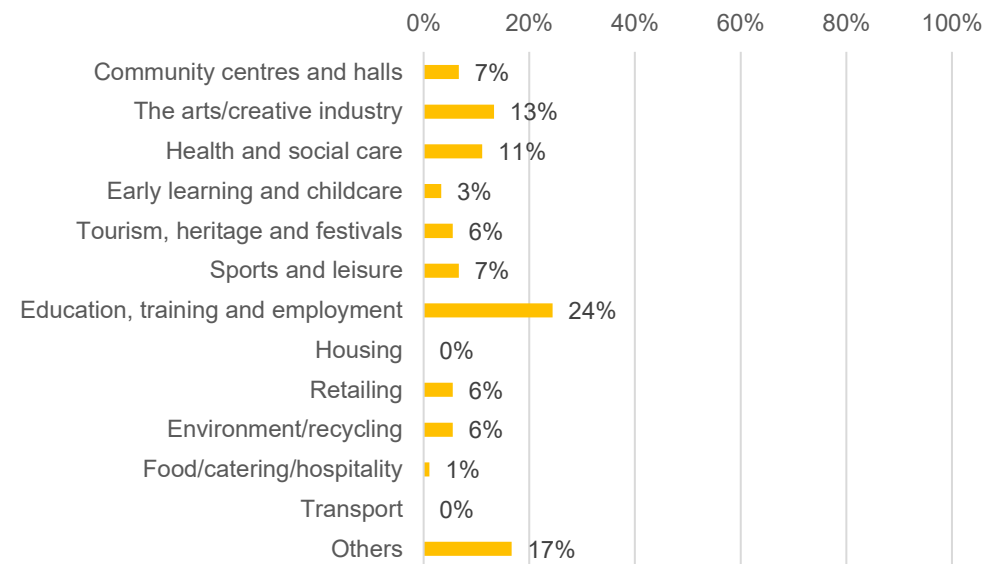


- 1. Introduction**
- 2. Executive Summary**
- 3. Key Figures**
- 4. Full Survey Results**
 - 4.1 SEs' Mission Orientation**
 - 4.2 SEs' Tech Adoption Experiences**
 - 4.3 SEs' Organisational Profiles**

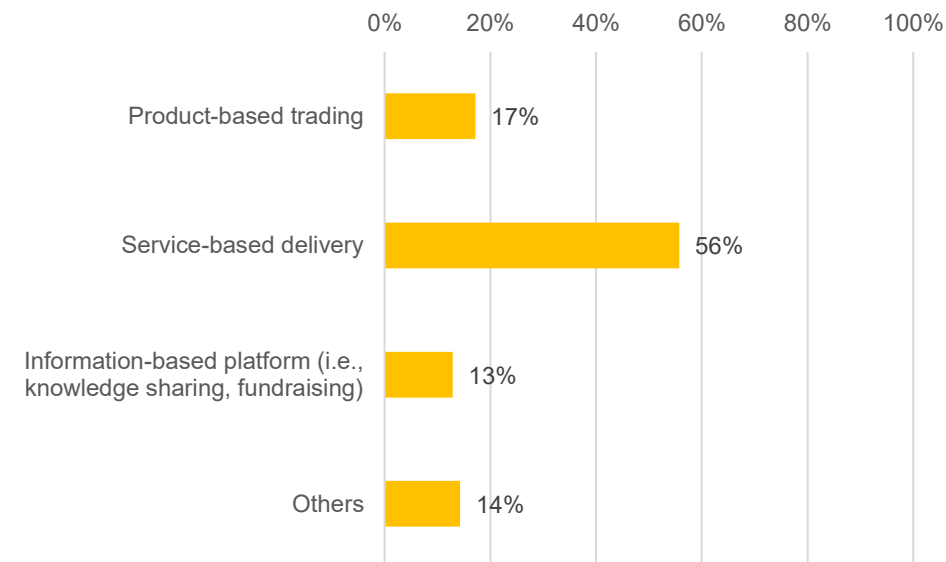
4.1 SEs' Mission Orientation (1/5)

1. **Which fields does your organisation currently work in?**
2. **What does your organisation primarily offer?**
3. Which is the primary sector where your organisation engages?
4. What is the primary channel currently used to deliver your organisation's products and/or services?
5. Did your organisation change the products and/or service delivery channels due to the Covid pandemic?
6. Which direction did the delivery channels shift due to the Covid pandemic?
7. What is the primary technology used to enable the online channel shift?
8. Did your organisation work with any external partners to enable this channel shift?
9. If you did work with external partners, who is the primary external partner that your organisation worked with to enable the channel shift?
10. Is your organisation's position more social or business mission-oriented?

1. Which fields does your organisation currently work in?
 (The classification follows the SE Census report.)



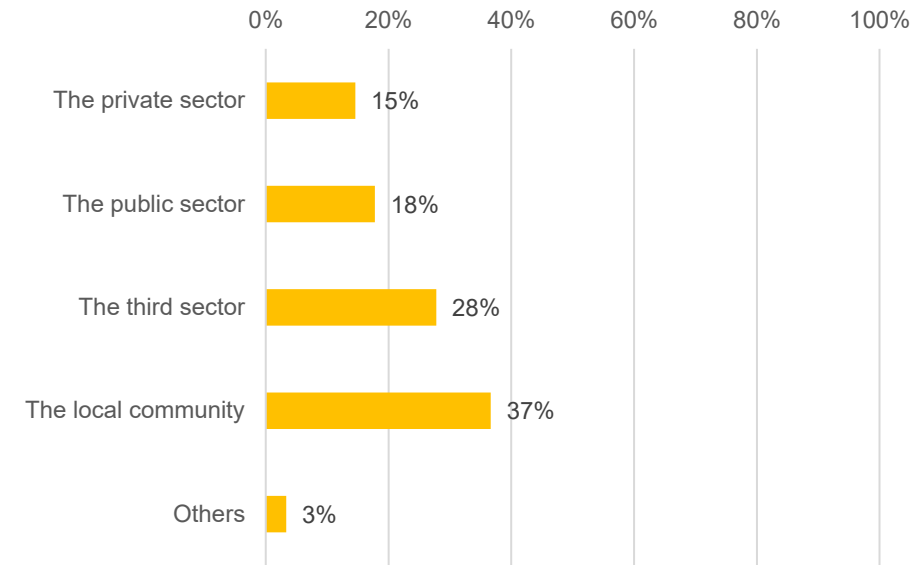
2. What does your organisation primarily offer?



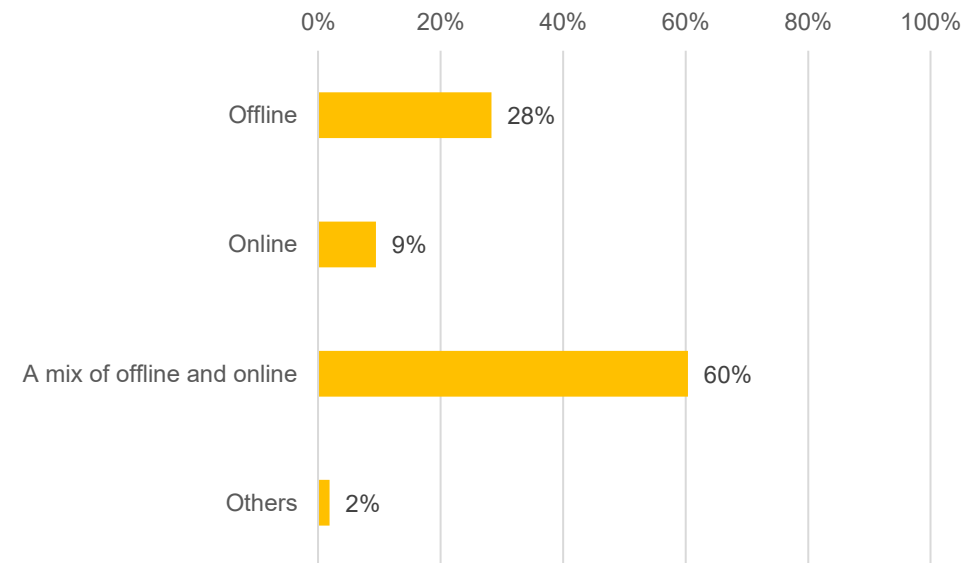
4.1 SEs' Mission Orientation (2/5)

1. Which fields does your organisation currently work in?
2. What does your organisation primarily offer?
3. **Which is the primary sector where your organisation engages?**
4. **What is the primary channel currently used to deliver your organisation's products and/or services?**
5. Did your organisation change the products and/or service delivery channels due to the Covid pandemic?
6. Which direction did the delivery channels shift due to the Covid pandemic?
7. What is the primary technology used to enable the online channel shift?
8. Did your organisation work with any external partners to enable this channel shift?
9. If you did work with external partners, who is the primary external partner that your organisation worked with to enable the channel shift?
10. Is your organisation's position more social or business mission-oriented?

3. Which is the primary sector where your organisation engages?



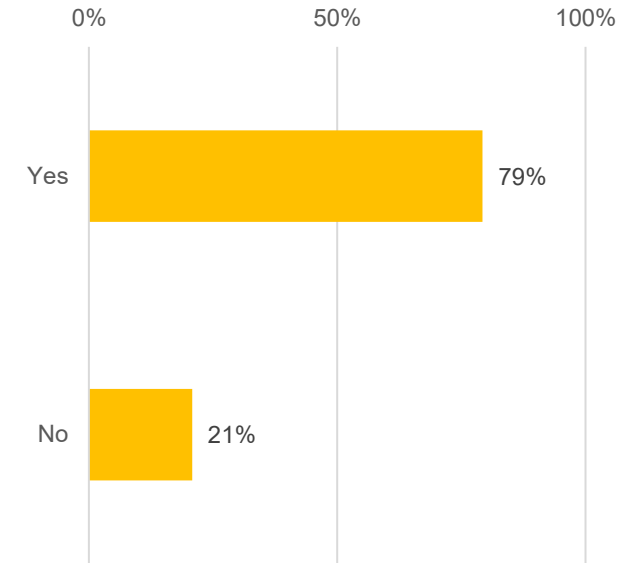
4. What is the primary channel currently used to deliver your organisation's products and/or services?



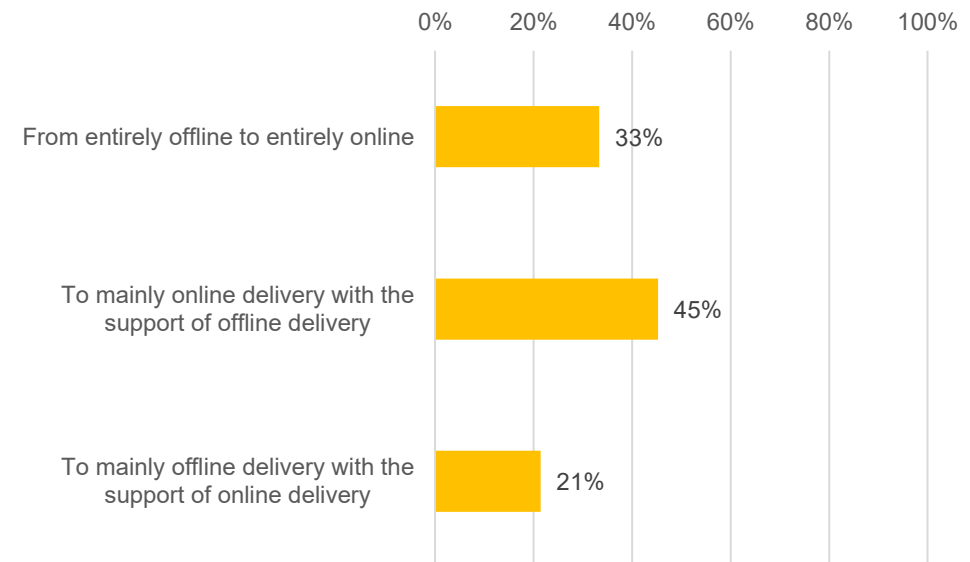
4.1 SEs' Mission Orientation (3/5)

1. Which fields does your organisation currently work in?
2. What does your organisation primarily offer?
3. Which is the primary sector where your organisation engages?
4. What is the primary channel currently used to deliver your organisation's products and/or services?
5. **Did your organisation change the products and/or service delivery channels due to the Covid pandemic?**
6. **Which direction did the delivery channels shift due to the Covid pandemic?**
7. What is the primary technology used to enable the online channel shift?
8. Did your organisation work with any external partners to enable this channel shift?
9. If you did work with external partners, who is the primary external partner that your organisation worked with to enable the channel shift?
10. Is your organisation's position more social or business mission-oriented?

5. Did your organisation change the products and/or service delivery channels due to the Covid pandemic?



6. Which direction did the delivery channels shift due to the Covid pandemic?

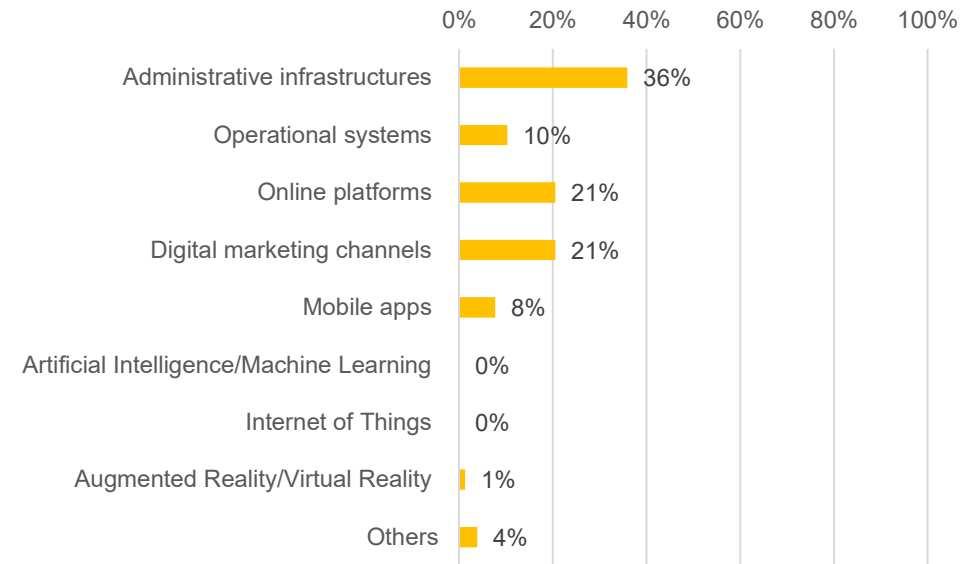


4.1 SEs' Mission Orientation (4/5)

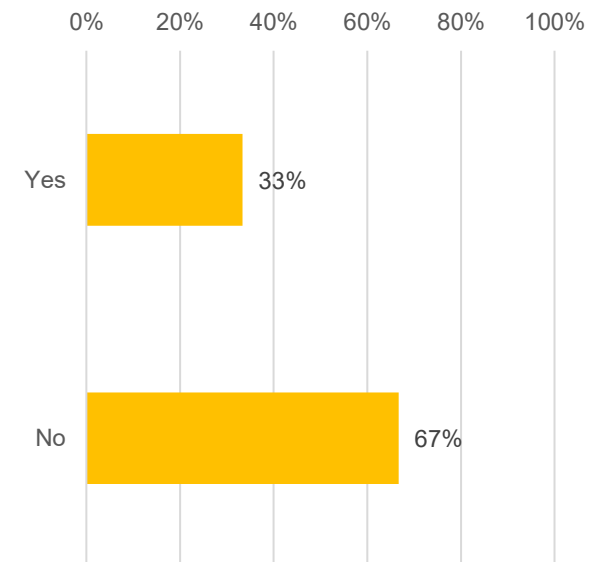
1. Which fields does your organisation currently work in?
2. What does your organisation primarily offer?
3. Which is the primary sector where your organisation engages?
4. What is the primary channel currently used to deliver your organisation's products and/or services?
5. Did your organisation change the products and/or service delivery channels due to the Covid pandemic?
6. Which direction did the delivery channels shift due to the Covid pandemic?
7. **What is the primary technology used to enable the online channel shift?**
8. **Did your organisation work with any external partners to enable this channel shift?**
9. If you did work with external partners, who is the primary external partner that your organisation worked with to enable the channel shift?
10. Is your organisation's position more social or business mission-oriented?

7. What is the primary technology used to enable the online channel shift?

(Please refer to the appendix for examples of each technology type)



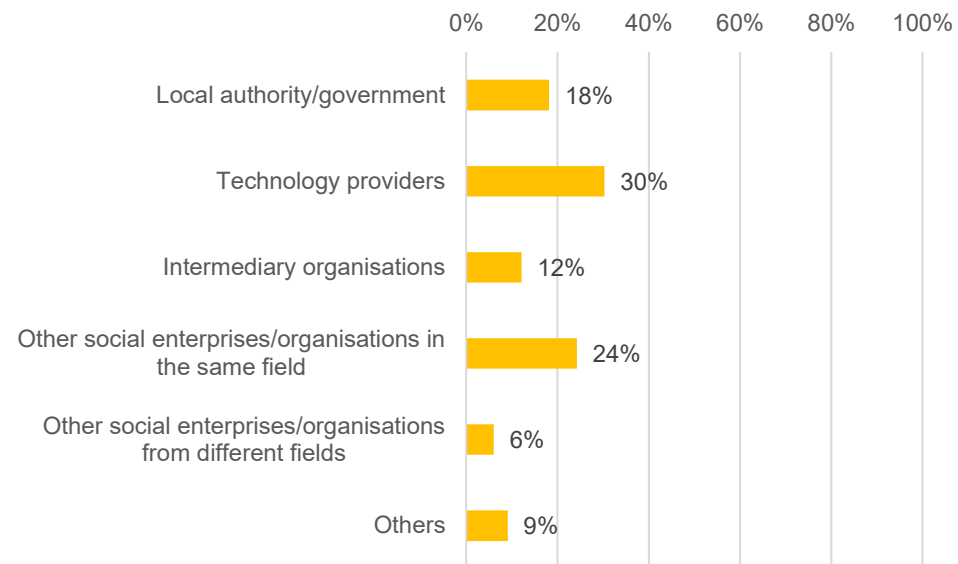
8. Did your organisation work with any external partners to enable this channel shift?



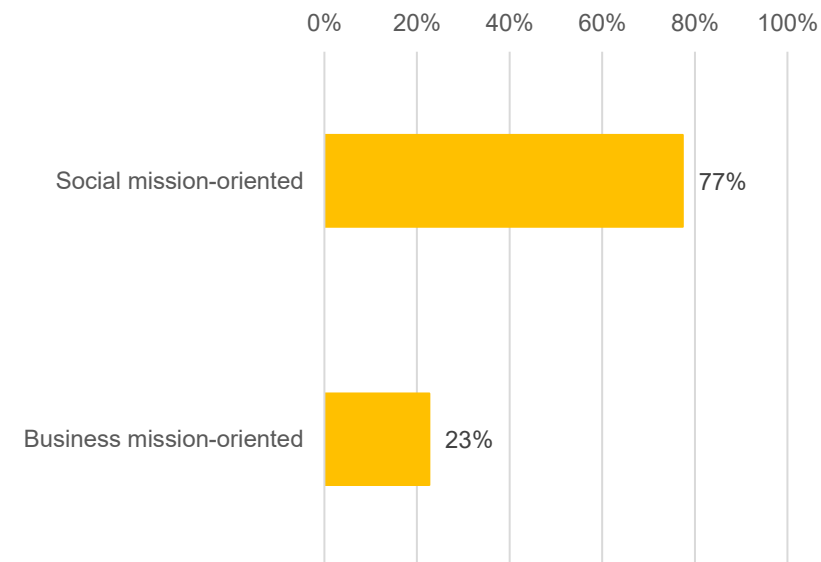
4.1 SEs' Mission Orientation (5/5)

1. Which fields does your organisation currently work in?
2. What does your organisation primarily offer?
3. Which is the primary sector where your organisation engages?
4. What is the primary channel currently used to deliver your organisation's products and/or services?
5. Did your organisation change the products and/or service delivery channels due to the Covid pandemic?
6. Which direction did the delivery channels shift due to the Covid pandemic?
7. What is the primary technology used to enable the online channel shift?
8. Did your organisation work with any external partners to enable this channel shift?
9. **If you did work with external partners, who is the primary external partner that your organisation worked with to enable the channel shift?**
10. **Is your organisation's position more social or business mission-oriented?**

9. If you did work with external partners, who is the primary external partner that your organisation worked with to enable the channel shift?



10. Is your organisation's position more social or business mission-oriented?





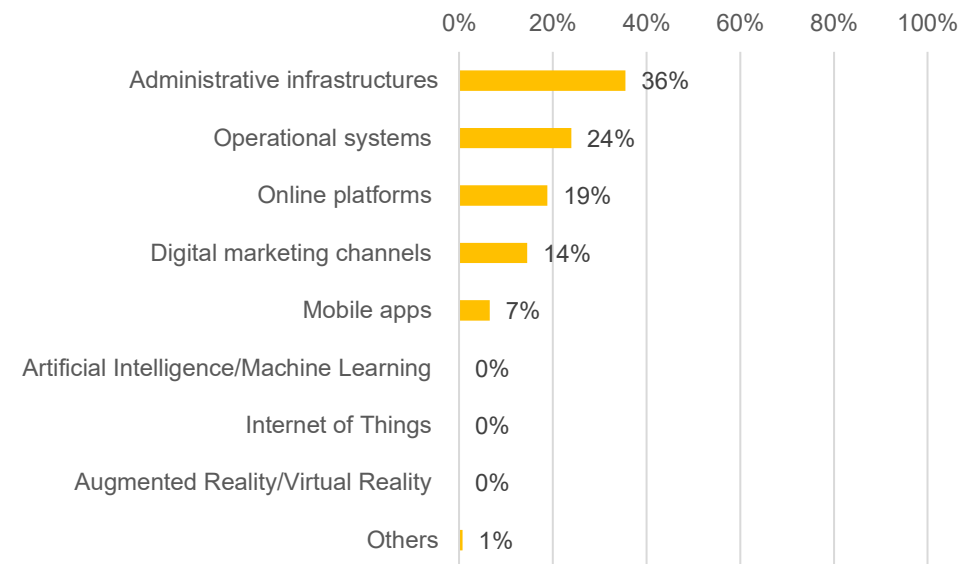
1. Introduction
2. Executive Summary
3. Key Figures
- 4. Full Survey Results**
 - 4.1 SEs' Mission Orientation
 - 4.2 SEs' Tech Adoption Experiences**
 - 4.3 SEs' Organisational Profiles

4.2 SEs' Technology Adoption Experiences (1/5)

11. Choose up to three technologies that are relevant to your organisation's internal operations.
12. Choose up to three technologies that are relevant to your organisation's external service delivery.
13. Did your organisation consider implementing new technology in the past 12 months?
14. Choose up to three factors that your organisation considers when planning to implement new technology.
15. For the factors selected, where does your organisation primarily obtain information to address these factors?
16. Rank up to three challenges that hinder your organisation from implementing technology.
17. Did your organisation implement new technology in the past 12 months?
18. What type of technologies has your organisation implemented?
19. Did your organisation benefit from implementing this technology?
20. Would you recommend other organisations with similar needs implement the same technology?

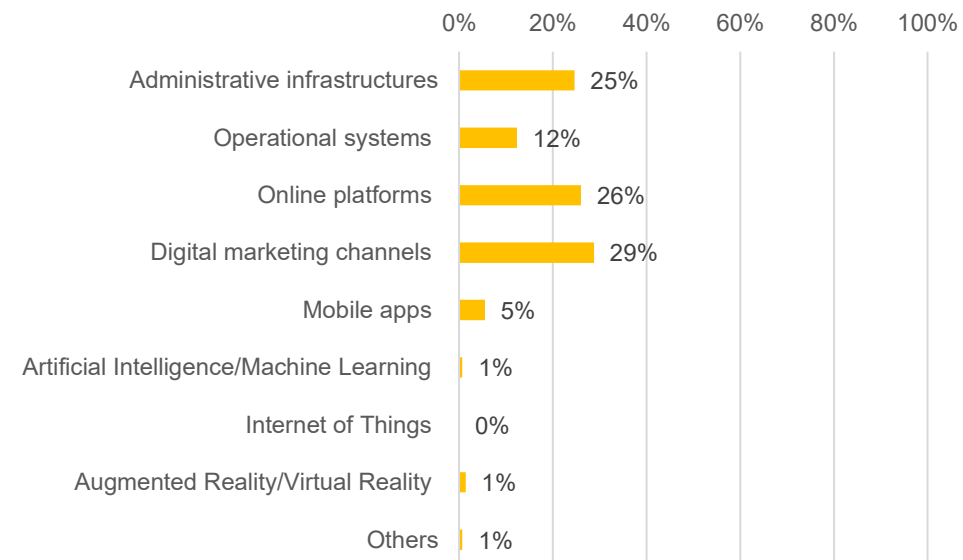
11. Choose up to three technologies that are relevant to your organisation's internal operations.

(Please refer to the appendix for examples of each technology type)



12. Choose up to three technologies that are relevant to your organisation's external service delivery.

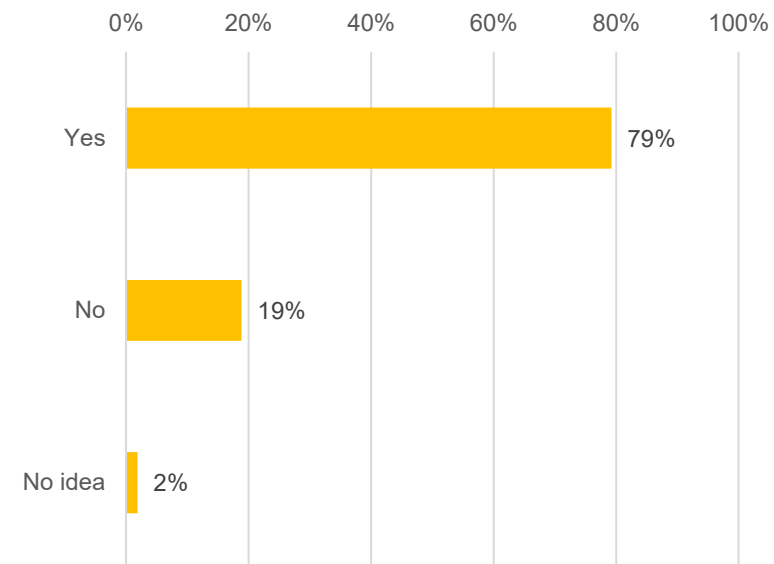
(Please refer to the appendix for examples of each technology type)



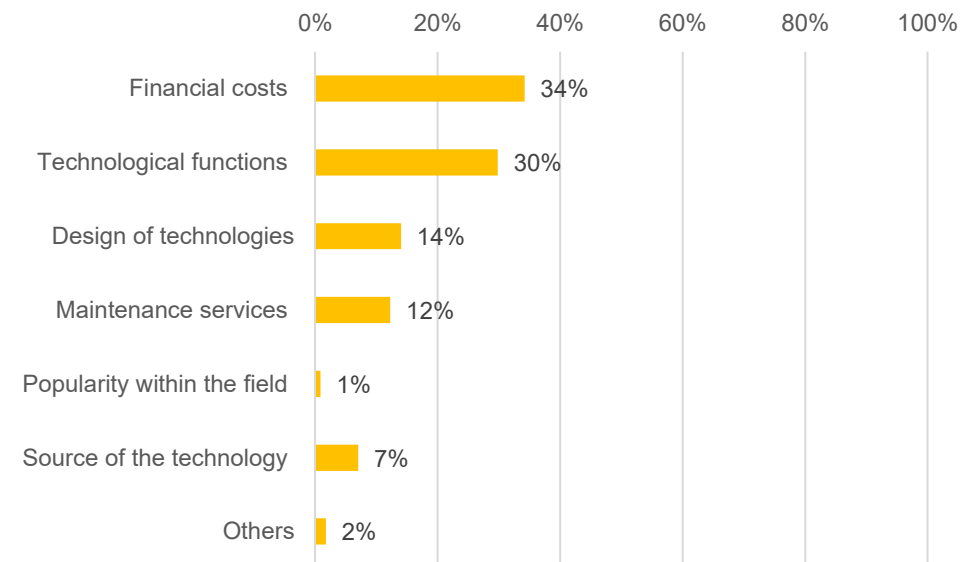
4.2 SEs' Technology Adoption Experiences (2/5)

11. Choose up to three technologies that are relevant to your organisation's internal operations.
12. Choose up to three technologies that are relevant to your organisation's external service delivery.
13. **Did your organisation consider implementing new technology in the past 12 months?**
14. **Choose up to three factors that your organisation considers when planning to implement new technology.**
15. For the factors selected, where does your organisation primarily obtain information to address these factors?
16. Rank up to three challenges that hinder your organisation from implementing technology.
17. Did your organisation implement new technology in the past 12 months?
18. What type of technologies has your organisation implemented?
19. Did your organisation benefit from implementing this technology?
20. Would you recommend other organisations with similar needs implement the same technology?

13. Did your organisation consider implementing new technology in the past 12 months (Sep. 2021-2022)?



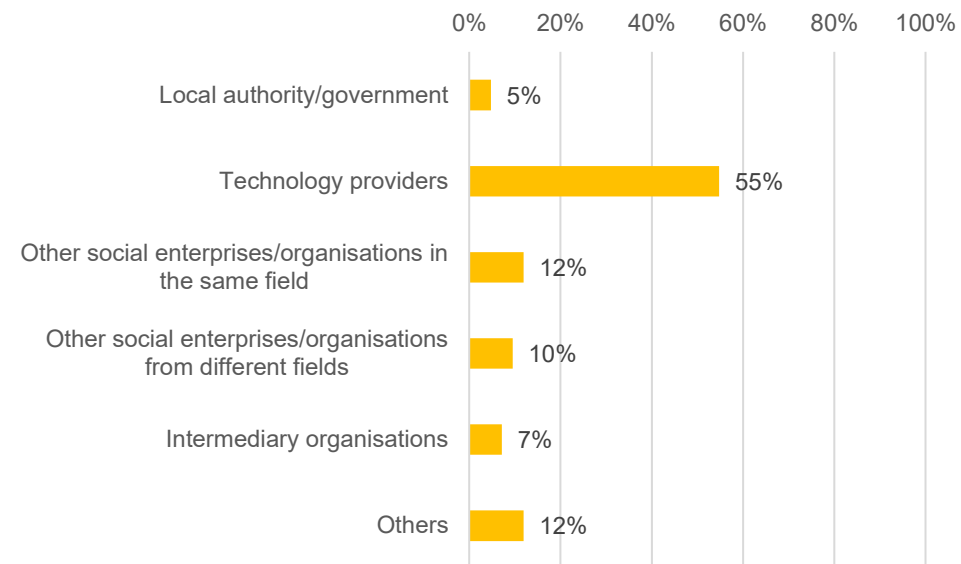
14. Choose up to three factors that your organisation considers when planning to implement new technology.
 (Please refer to the appendix for examples of each consideration)



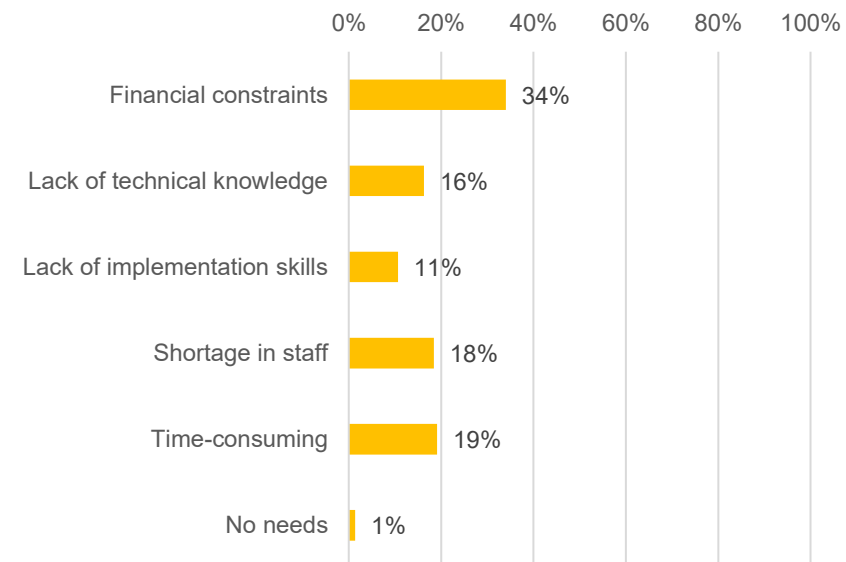
4.2 SEs' Technology Adoption Experiences (3/5)

11. Choose up to three technologies that are relevant to your organisation's internal operations.
12. Choose up to three technologies that are relevant to your organisation's external service delivery.
13. Did your organisation consider implementing new technology in the past 12 months?
14. Choose up to three factors that your organisation considers when planning to implement new technology.
15. **For the factors selected, where does your organisation primarily obtain information to address these factors?**
16. **Rank up to three challenges that hinder your organisation from implementing technology.**
17. Did your organisation implement new technology in the past 12 months?
18. What type of technologies has your organisation implemented?
19. Did your organisation benefit from implementing this technology?
20. Would you recommend other organisations with similar needs implement the same technology?

15. For the factors selected, where does your organisation primarily obtain information to address these factors?



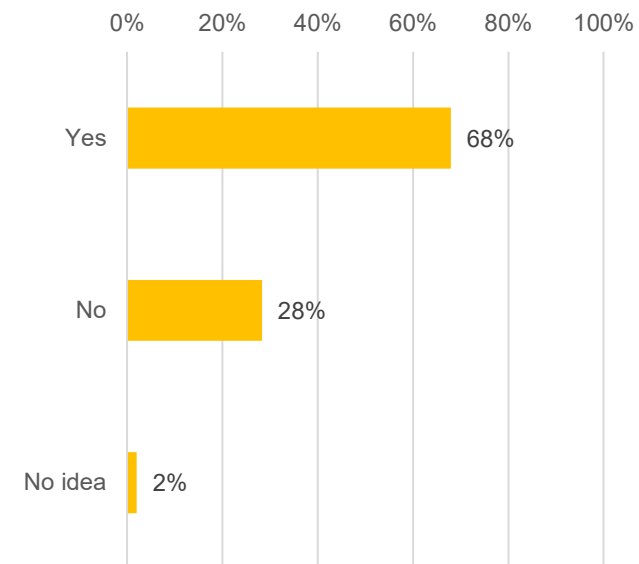
16. Rank up to three challenges that hinder your organisation from implementing technology.



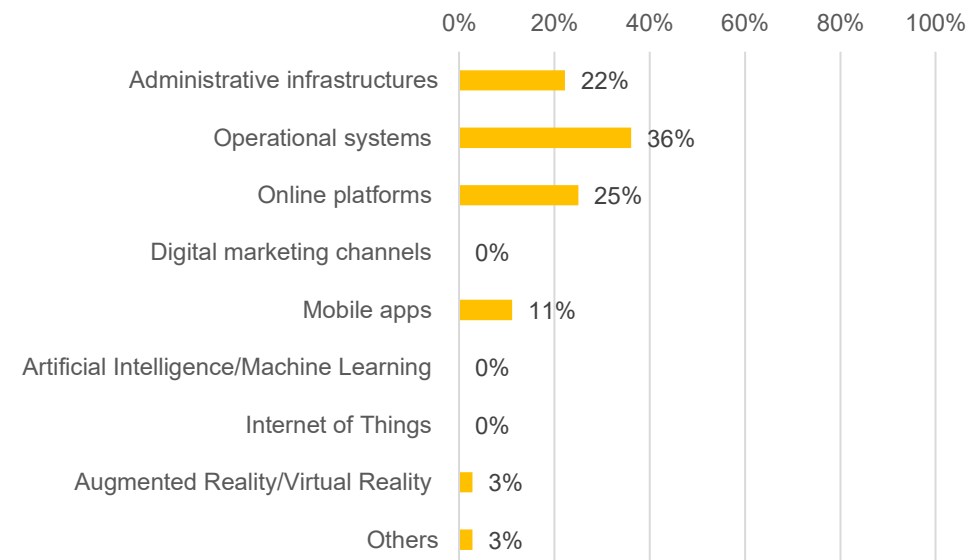
4.2 SEs' Technology Adoption Experiences (4/5)

11. Choose up to three technologies that are relevant to your organisation's internal operations.
12. Choose up to three technologies that are relevant to your organisation's external service delivery.
13. Did your organisation consider implementing new technology in the past 12 months?
14. Choose up to three factors that your organisation considers when planning to implement new technology.
15. For the factors selected, where does your organisation primarily obtain information to address these factors?
16. Rank up to three challenges that hinder your organisation from implementing technology.
17. **Did your organisation implement new technology in the past 12 months?**
18. **What type of technologies has your organisation implemented?**
19. Did your organisation benefit from implementing this technology?
20. Would you recommend other organisations with similar needs implement the same technology?

17. Did your organisation implement new technology in the past 12 months (Sep. 2021-2022)?

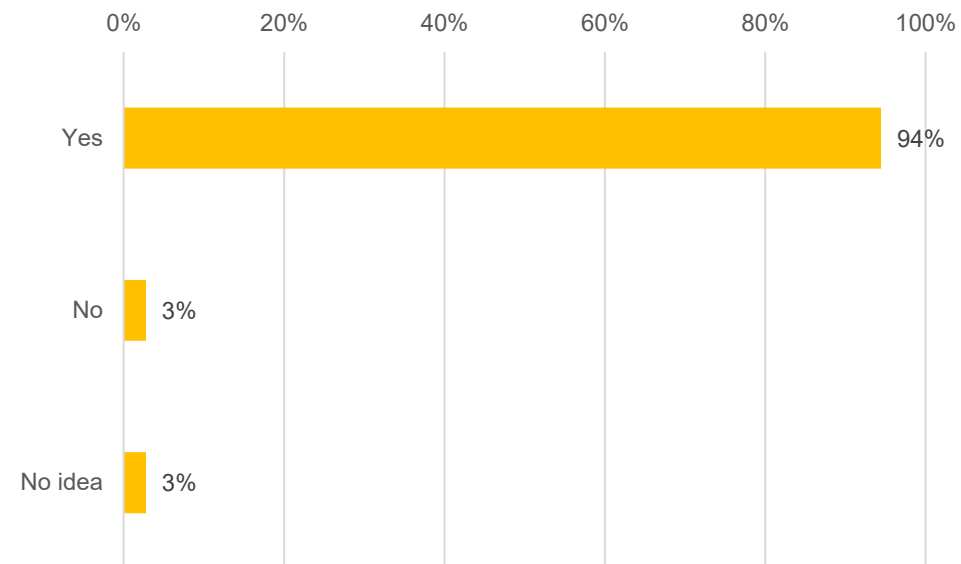


18. What type of technologies has your organisation implemented?
(Please refer to the appendix for examples of each technology type)

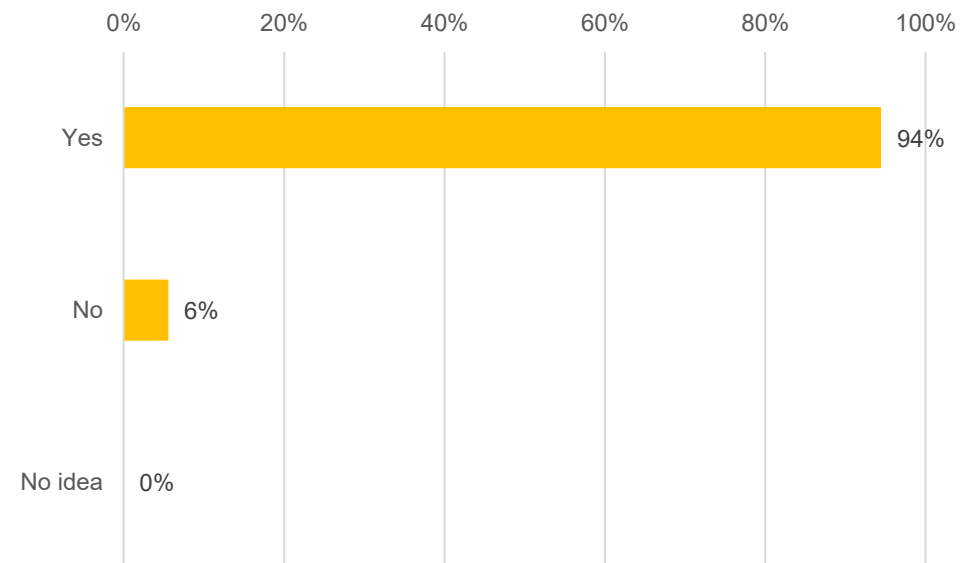


4.2 SEs' Technology Adoption Experiences (5/5)

19. Did your organisation benefit from implementing this technology?



20. Would you recommend other organisations with similar needs implement the same technology?



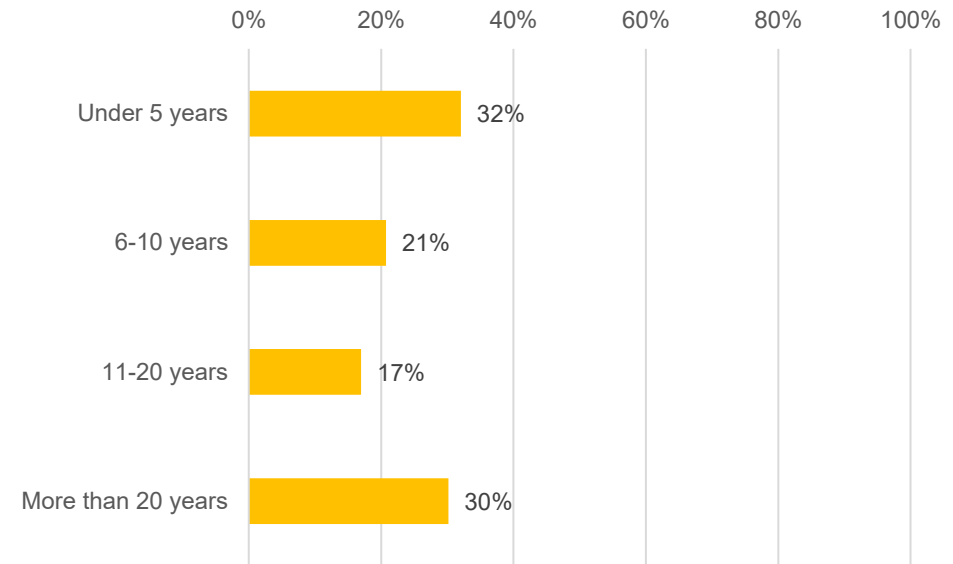
11. Choose up to three technologies that are relevant to your organisation's internal operations.
12. Choose up to three technologies that are relevant to your organisation's external service delivery.
13. Did your organisation consider implementing new technology in the past 12 months?
14. Choose up to three factors that your organisation considers when planning to implement new technology.
15. For the factors selected, where does your organisation primarily obtain information to address these factors?
16. Rank up to three challenges that hinder your organisation from implementing technology.
17. Did your organisation implement new technology in the past 12 months?
18. What type of technologies has your organisation implemented?
19. **Did your organisation benefit from implementing this technology?**
20. **Would you recommend other organisations with similar needs implement the same technology?**



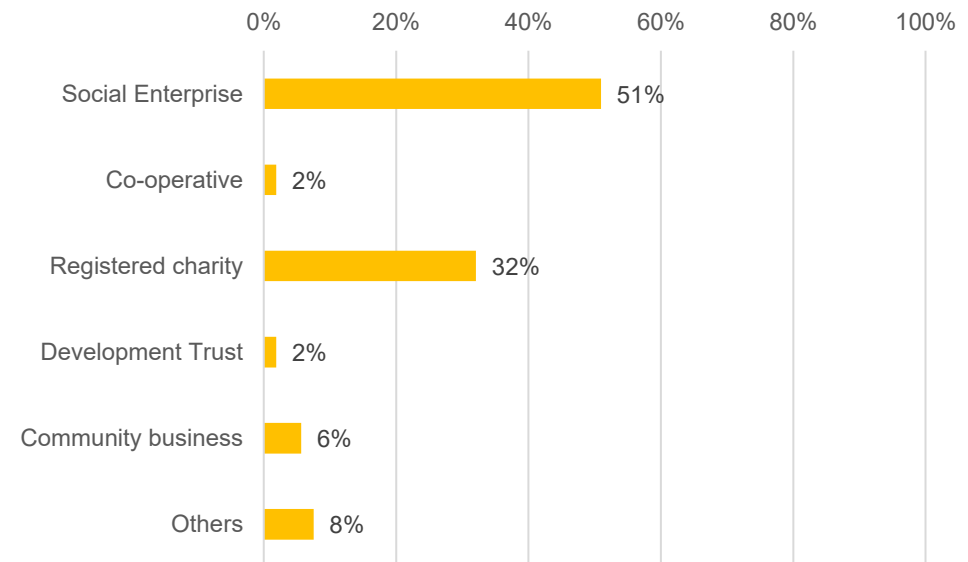
1. Introduction
2. Executive Summary
3. Key Figures
- 4. Full Survey Results**
 - 4.1 SEs' Mission Orientation
 - 4.2 SEs' Tech Adoption Experiences
 - 4.3 SEs' Organisational Profiles**

4.3 SEs' Organisational Profiles (1/2)

21. How many years your organisation has been in this field?



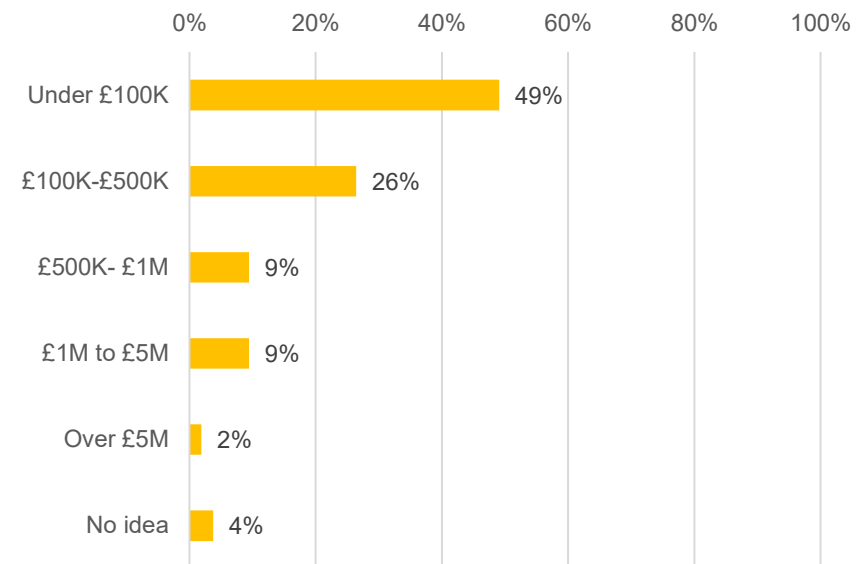
22. The organisational form that best describes your organisation.



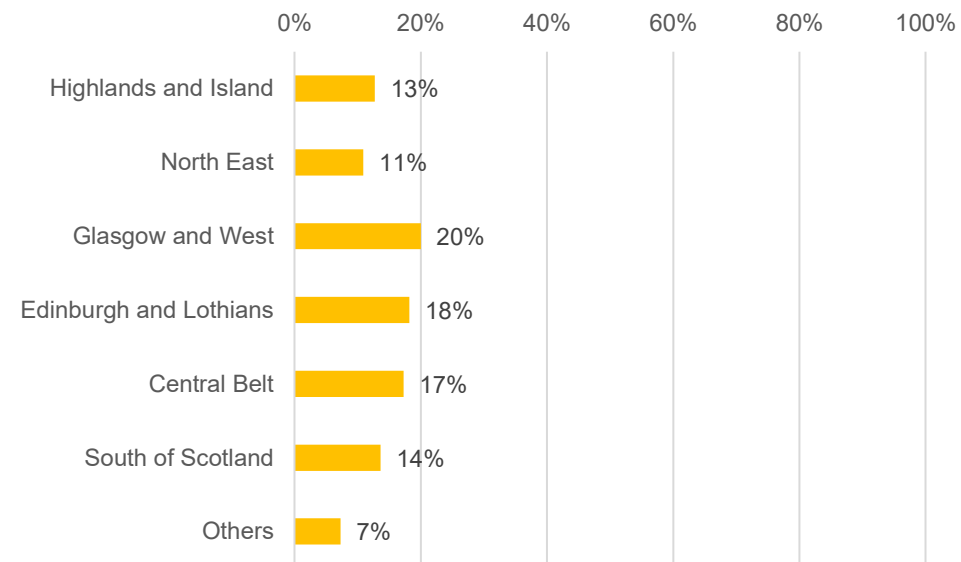
- 21. How many years your organisation has been in this field?
- 22. The organisational form that best describes your organisation.
- 23. Your organisation's turnover in the past 12 months.
- 24. The areas where your organisation operates.

4.3 SEs' Organisational Profiles (2/2)

23. Your organisation's turnover in the past 12 months (Sep. 2021-2022).



24. The areas where your organisation operates.



21. How many years your organisation has been in this field?
22. The organisational form that best describes your organisation.
23. Your organisation's turnover in the past 12 months.
24. The areas where your organisation operates.



Appendix

Examples of each technology type (Q7, Q11, Q12, Q18)

- Administrative infrastructures: i.e. Email, Microsoft Office 365, Online meeting apps
- Operational systems: i.e. payment software, inventory systems
- Online platforms: i.e. organisation websites, fundraising websites
- Digital marketing channels: i.e. social media
- Mobile apps: i.e. organisation apps or third-party apps
- Artificial Intelligence/Machine Learning: i.e. algorithm used for fundraising, chatbots
- Internet of Things: i.e. robotics, medical sensors
- Augmented Reality/Virtual Reality: i.e. AR-driven services

Examples of considerations for technology adoption (Q14)

- Financial costs: i.e. one-time expense or subscription
- Technological Functions: i.e. wide-coverage or specific
- Design of Technologies: i.e. off-the-shelf or customised design
- Maintenance services: i.e. included or at request
- Popularity within the field: i.e. well-known or niche brand
- Source of the technology: i.e. open-source or branded

Thank you

Have questions?

Get in touch: [Han-Ju \(Emma\) Yang](#)

Han-Ju.Yang@ed.ac.uk