REPHRAIN
Protecting citizens online

Unlocking Privacy Enhancing Technologies (PETs): the importance of implementing PETs for SMEs

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About the research

Since the introduction of the General Data Protection Regulation (GDPR) in the UK in 2016, there has been growing attention on devices that collect and process citizens' data. Small and medium-sized enterprises (SMEs), which often rely heavily on data and technology, are typically underprepared to protect these critical areas. By adopting Privacy Enhancing Technologies (PETs), SMEs can mitigate privacy risks and better comply with GDPR.

PETs are tools and techniques designed to safeguard individuals' privacy while handling personal data. They work by limiting how much personal information is used, enhancing security, and giving people more control over their data. Examples include tools for encrypting data, anonymising information, or enabling secure data sharing. Alongside protecting individuals' privacy, advantages of PETs include building customer trust, streamlining data handling processes, and offering SMEs a competitive edge.

To understand how SMEs understand and use PETs, we surveyed and interviewed SME owners and practitioners. The outcome of this project is an SME Privacy Starter Pack, which provides actionable recommendations on privacy practices and technologies. It is designed to help SMEs enhance their privacy maturity and conduct privacy assessments across a range of key areas.

This project was supported by AwareGo, the Chartered Institute for Information Security, the London Digital Security Centre, and the REPHRAIN team.

Policy recommendations

Leverage existing channels to promote PETS guidance and foster privacy knowledge sharing among SMEs

The government should utilise existing channels to enhance PETs understanding among SMEs. These could include:

- Cyber Resilience Centres
- NCSC advisories
- SME support networks, e.g. Innovate UK or Help to Grow

Such channels would enable the government to share clear and consistent PETs guidance with SMEs, which should incorporate the Privacy Starter Pack.

This would also help establish networks of SMEs who can learn from one another. Specific privacy-focused forums should be developed from these networks, such as workshops and online communities to help SMEs share practical insights on privacy challenges and PETs adoption.

Drawing upon existing channels would help maximise SME engagement, and ensure that SMEs receive trusted information through familiar and authoritative sources.

Expand and tailor privacy training for SMEs

The government should develop targeted training programmes specifically designed for SMEs to build their capacity in privacy protection. These programmes should focus on practical, actionable knowledge tailored to the unique challenges faced by SMEs.

Currently, the National Cyber Security Centre (NCSC) offers training such as the Funded Cyber Essentials Programme, which primarily emphasises cybersecurity. To better address privacy needs, these efforts should be expanded to integrate PETs adoption strategies and relevant PET tools.

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Key findings

Findings from our study highlighted that SMEs are concerned about impacts from potential cyberattacks, such as reputational damage, regulatory non-compliance, or financial loss. However, they rarely consider privacy as a daily priority. Many SMEs believe they are less attractive targets for cybercriminals due to their lower financial value. Additionally, current tools that support SMEs in managing privacy and cybersecurity often fail to distinguish clearly between privacy and information security.

Implementing PETs can be challenging for SMEs due to the complexity of privacy-specific tools, which often involve technical jargon and demands. This makes it difficult for them to integrate these tools without external support, such as hiring consultants or relying on industry support groups.

In response, we developed a Privacy Starter Pack to streamline PETs information for SMEs. This covers five key areas that SMEs should focus on to enhance their privacy measures:

The Privacy Starter Pack also features:

A tiered approach

It presents guidelines at baseline, intermediate, and advanced levels, which helps SMEs take manageable, measurable steps towards improving privacy practices. It guides businesses from basic privacy awareness to full PETs adoption, while accounting for existing knowledge in areas like information security. Each level reflects the company's progress in addressing privacy topics.

Relevant, SME-focused information

The information provided is accessible and tailored to the needs of SMEs. Each topic follows a decision-tree format with concise, bite-sized information that guides businesses toward effective tool adoption. Awareness materials, such as scenarios, leaflets, and templates, are also included to support SMEs in understanding and applying privacy practices.

Our Privacy Starter Pack is still a prototype, and it must be refined further following feedback from SMEs and from bodies who provide guidance, like the NCSC. But we are confident that it will provide a valuable starting point for any SME looking to improve their privacy measures.

REPHRAIN, led by the University of Bristol and partnered with University College London, King's College London, the University of Edinburgh, and the University of Bath, unites experts across disciplines such as Computer Science, Law, Psychology, and Public Policy to explore how to keep people safe online while enabling full participation in digital technologies. Announced by UKRI in October 2020, REPHRAIN now has over 100 experts from 23 UK institutions, working across 50+ research projects to build the UK's leading interdisciplinary community in this mission.

Further information

Access our paper:
Bada, M. *et al* (2023) 'Supporting Small and Medium-Sized Enterprises in Using Privacy Enhancing Technologies', *REPHRAIN*. Available at: https://bpb-eu-w2.wpmucdn.com/blogs.bristol.ac.uk/dist/1/670/files/2024/01/Supporting-Small-and-Medium-Sized-Enterprises-in-Using-Privacy-Enhancing-Technologies-3bf4fae2110f8054.pdf.

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