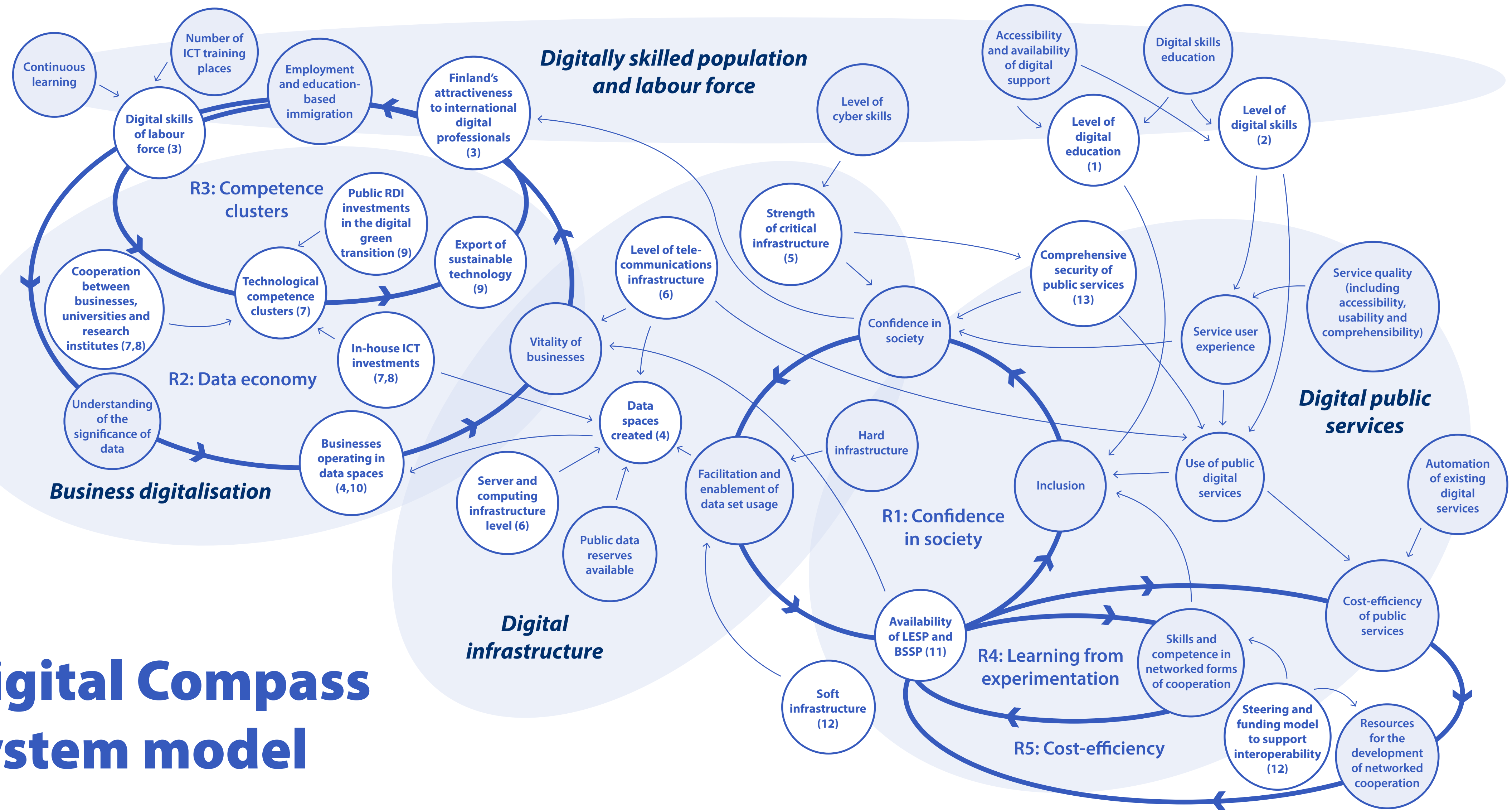


# Digital Compass system model



Cross-sectoral management and development of digitalisation (14)

Regulatory enablers and clarity for the utilisation of data sets

Cooperation for the development of contractual models and operating models

Cross-sectoral cooperation

# Description of the Digital Compass system model

**The figure shows the Digital Compass system model, providing a visual illustration of the various cardinal points, objectives and variables (components) between them. As shown, the cardinal points of the Digital Compass include a digitally skilled population and labour force, digital infrastructure, business digitalisation, digital public services and cross-sectoral cooperation.**

## **Cross-sectoral cooperation**

Under the Digital Compass, cross-sectoral management is one of the most important preconditions for success in Finland's digital transformation. In the cardinal point for cross-sectoral cooperation, 'cross-sectoral management and development of digitalisation' (Digital Compass, objective 14) allow progress in the four cardinal points and links them together. This also allows the 'availability of LESP and BSSP' (life event-based service packages and business situation-based service packages) (objective 11) in the cardinal point for digital public services.

Components that enable cross-sectoral cooperation include 'cooperation for the development of contractual models and operating models' and 'regulatory enablers and clarity for the utilisation of data sets.' In

the system model, these components enable other ones like 'soft infrastructure;' in turn, this affects the 'facilitation and enablement of data set usage' in the digital infrastructure cardinal point.

## **Digital infrastructure**

Under the Digital Compass, digital infrastructure underpins the data economy and digital services. This cardinal point in the system model shows the 'hard infrastructure' that affects 'the facilitation and enablement of data set usage.' The cardinal point for digital infrastructure includes the variable 'data spaces created' (objective 4). The 'data spaces created' and the 'level of telecommunications infrastructure' (objective 6) affect 'businesses operating in data spaces' and the 'vitality of businesses' in the cardinal point for business digitalisation. In turn, the data spaces created enable the 'level of server and computing infrastructure' (objective 6) and the 'public data reserves available' on the digital infrastructure side.

In the cardinal point for digital infrastructure, the figure of the system model shows one reinforcing feedback loop (R1: Confidence in society). This takes account of the component 'strength of critical infrastructure' (objective 5), which builds 'confidence in society' and contributes to the 'comprehensive security of public services' (objective 13) in the cardinal point for digital public services. The 'level of critical infrastructure' can be influenced through the cardinal point for the digitally skilled population and labour force: for instance, by strengthening the 'level of cyber skills.'

## **Digitally skilled population and labour force**

Based on the Digital Compass, the digital transformation is also enabled by a digitally skilled population and labour force. In this cardinal point, we can influence service user experience and inclusion as experience (cardinal point: digital public services). 'Digital skills education' affects both the 'level of digital Bildung' (objective 1) and the 'level of digital skills' (objective 2); in turn, these affect the 'service user experience.' Inclusion as experience is enhanced by the level of digital Bildung; the latter can also be influenced through the 'accessibility and availability of digital support.'

When confidence in society grows in the cardinal point for digital public services, it increases 'Finland's attractiveness to international digital professionals' (objective 3) in the cardinal point for the digitally skilled population and labour force. This is also included in two other feedback loops of the system model (R2: data economy and R3: competence clusters). The aforementioned 'Finland's attractiveness to international digital professionals' increases 'employment and education-based immigration;' as this grows, it improves the 'digital skills and competencies of the labour force' (objective 3). The digital skills and competencies of the labour force are also influenced by other components like the 'number of ICT training places' and 'continuous learning.'

# Description of the Digital Compass system model

## Digital public services

In the figure of the system model, the cardinal point for digital public services shows three feedback loops. The LESP and BSSP availability components described above are an integral part of all these three loops. Feedback loop R1 (confidence in society): Through inclusion, the life event-based public services implemented build public confidence. A high level of confidence in society contributes to 'data set usage' (i.e. citizens have confidence that their data is being used appropriately and ethically); this enables the development of new public services. To build trust, the key is for people to know how their data is utilised and that they can influence the use of their data if necessary. In addition to this, the development of new types of life event-oriented and business situation-related public services requires new forms of networked cooperation skills which will evolve as new services are implemented (loop R4: learning from experimentation, 'skills and competence in networked forms of cooperation').

In turn, the third feedback loop (R5: cost-efficiency) in the cardinal point for digital public services means that the development of life event-oriented and business situation-related public services requires sufficient 'resources for the development of networked cooperation.' When these services are implemented, they are thought to improve 'public sector cost-efficiency' which enables resources for the development of new services. The loops of cost-efficiency and learning from experimentation are both influenced by the component 'steering and funding model to support interoperability' (objective 12).

In the cardinal point for digital public services, 'service quality (including accessibility, usability and comprehensibility)' also affects the 'service user experience;' in turn, this builds the aforementioned 'confidence in society' (R1) and increases the 'use of public digital services.' The latter reinforces the 'cost-efficiency of public services' (R5) described earlier. Cost-efficiency is also affected for instance, by the 'automation of existing digital services.'

## Business digitalisation

Under the Digital Compass, competence is the bottleneck of this cardinal point. In the system model, 'growth in the digital skills and competencies of the labour force' reinforces 'technological competence clusters' (objective 7) in the cardinal point for business digitalisation. Furthermore, competence improves 'understanding of the significance of data.' Technological competence clusters are also boosted by 'public RDI investments in the digital green transition' (objective 9) and 'cooperation between businesses, universities and research institutes' (objectives 7 and 8).

In the feedback loop of the competence clusters (R3), the number of 'technological competence clusters' increases the 'export of sustainable technology;' in turn, this promotes 'Finland's attractiveness to international digital professionals' (cardinal point: digitally skilled population and labour force). Technological centres for expertise in selected regions form the basis for high-tech exports, also including sustainable technology solutions (the digital green transition).

In the data economy loop (R2), 'understanding of the significance of data' also increases the number of 'businesses operating in data spaces' (objectives 4 and 10); this increases the "vitality of businesses' mentioned earlier. Among businesses, understanding of the significance of data to business operations is a precondition for companies to join data spaces and utilise these in their operations. The 'vitality of businesses' also increases 'Finland's attractiveness to international digital professionals' (cardinal point: digitally skilled population and labour force). Increasing data utilisation leads to an increasingly skilled labour force; it also promotes the data economy-related skills and competence of businesses. In the cardinal point for business digitalisation, 'in-house ICT investments' also affect the technological competence clusters while in the cardinal point for digital infrastructure, they increase the number of 'data spaces created' therein.