

## Framework for innovation-friendly regulation

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### Towards innovation-friendly regulation

Radical innovations and break-through technologies are desperately needed in solving today's difficult societal challenges, such as those created by climate change or ageing demographics. However, addressing complex societal challenges requires elaborate systemic planning, determined investments and often also, visionary and brave decisions by the legislators and regulators.

While radical innovation may bring much needed economic benefits and solutions to pressing societal challenges, they can also generate new risks and ethical dilemmas. Hence, today's legislators are faced with difficult questions in trying to foresee an optimal legal framework, which would sufficiently leave space for and encourage new solutions, but at the same time would ensure safe conditions and fair benefits to everyone.

In light of the above, increased attention is paid to developing *innovation-friendly* regulatory approaches and practices. The introduction of European Commission's Innovation Principle, as well as several national initiatives (such as regulatory sandboxes and regulation roadmaps), are good examples of such development.

So far, there has not been a common definition, nor a comprehensive framework to grasp the different aspects of innovation-friendly regulation approaches and practices. Developing such framework has been one of the main objectives in Finnish government commissioned study on "*Impacts of regulation on innovation and new markets*".<sup>1</sup> This Policy Brief presents some first findings and introduces a draft framework for innovation-friendly regulation.

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<sup>1</sup> The study is conducted as part of the Government's analysis, assessment and research activities by a consortium of 4FRONT, MDI Public, KPMG, Technopolis Group, Otto Toivanen (Aalto University) and Tuomas Takalo (Bank of Finland / VATT).

## Purpose of the framework

The purpose of the framework, building on previous literature (see references for key sources) and expert views, is to structure the key elements, tools, and requirements for implementing innovation-friendly regulation in practice. It is aimed especially for Finnish regulators and government officials working with regulation but can hopefully be useful in other countries and contexts as well.

The framework – and related approaches and practices – will be further elaborated based on case studies on best practices. Final report (in Finnish with executive summary in English) is set to be published in March 2020.

## Elements of innovation-friendly regulation practices

The framework consists of the following **six elements for innovation-friendly regulation** (Figure 1). The elements, described in more detail below, are aligned with the four phases of regulation processes (initiative, regulatory drafting, enforcement, monitoring and evaluation).

1. Innovation-friendly agenda setting
2. Innovation-friendly regulation strategies
3. Innovation-friendly regulatory processes
4. Innovation-friendly legislation principles
5. Innovation-friendly implementation practices
6. Innovation-friendly monitoring and evaluation

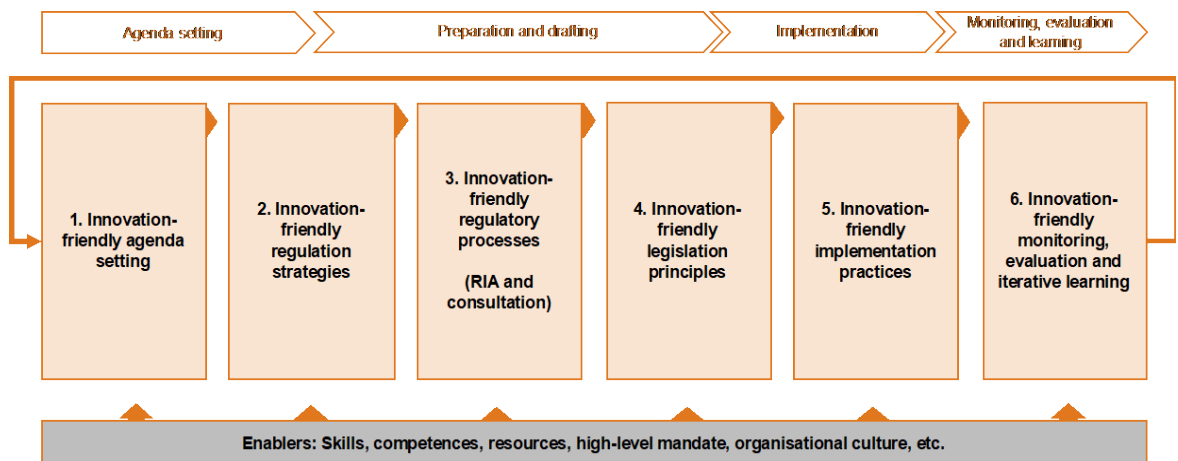


Figure 1. Elements of innovation-friendly regulation. Source: Authors.

### Innovation-friendly agenda setting

Regulating new innovations and technologies requires an iterative and collaborative approach in which, the regulator is not just a passive actor, but rather actively supporting innovation and creating a better understanding and long-term vision for regulatory framework.

Good examples of initiatives towards such **anticipatory regulation approaches** (as labelled by Armstrong 2019) have emerged recently. For example, The Committee for Tech-

nological Innovation and Ethics (Komet) in Sweden was established in 2018 to help the government to reduce uncertainty surrounding existing regulations and support policy development regarding new technologies<sup>2</sup>. Industry Transformation Roadmaps in Singapore<sup>3</sup>, in turn, aim to create a regulatory environment conducive to innovative business models and promote technology adoption, whereas The New Transport Policy Club (2012-2015)<sup>4</sup> facilitated common understanding of key stakeholders prior to the Finnish transport reform.

### Innovation-friendly regulation strategies

A key question for innovation-friendly regulation is to find the most suitable and efficient regulation strategy, which helps to achieve the policy goals while at the same time, enabling (or even actively supporting) the development and adoption of new innovations.

**Regulatory reforms** and legislations can be very efficient and powerful instruments to either support or constrain innovation and the development of markets. However, sometimes 'softer' instruments such as **self-regulation** or **regulation through information** can achieve the same goals more efficiently. Innovation Deals, Green Deals and other voluntary commitments<sup>5</sup> are good examples of such strategies.

### Innovation-friendly regulation processes

In many cases innovations are developed by actors, who deliberately want to disturb the existing markets, while incumbent actors may have incentives to preserve the prevailing *status quo*. Therefore, for innovation-friendly regulation, it is especially important to ensure broad and diverse **engagement and consultation** of different stakeholders, especially non-incumbents, as part of the regulation process.

Robust **Regulatory Impact Assessments** (RIA) are an essential part of all regulation. While, innovation perspectives have been increasingly integrated into RIA practices (OECD 2018), typically RIAs have been focusing on assessing the impacts of regulation on incumbent companies and do not pay attention to the effects on emerging new innovations. Tools such as The European Commission's Research and Innovation Tool<sup>6</sup> can help regulators to identify and assess the impacts on innovation.

### Innovation-friendly regulation principles

Innovations are characterised by long time-horizon, unpredictability, complexity and strong economic interests. Due to these characteristics, it is very difficult, if not impossible, to assess the impacts of regulation fully in advance. Therefore innovation-friendly regulation should pay specific attention to the **flexibility and adaptability** of regulations. In practice, experimentation clauses or different (technology-neutral) outcome-based regulation practices can be used to improve the flexibility. (Stewart 2010; Armstrong 2019)

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<sup>2</sup> The Committee for Technological Innovation and Ethics (Komet), <https://www.kometinfo.se/>

<sup>3</sup> e.g. Financial Services Industry Transformation Roadmap, <https://www.mas.gov.sg/development/financial-services-industry-transformation-roadmap>

<sup>4</sup> New Transport Policy Club. <https://valtioneuvosto.fi/hanke?tunnus=LVM058:00/2012>

<sup>5</sup> e.g. Green Deals in Netherlands <https://www.greendeals.nl/english>; Sitoumus2050 in Finland <https://sitoumus2050.fi/>

<sup>6</sup> Research and Innovation Tool, European Commission. [https://ec.europa.eu/info/sites/info/files/file\\_import/better-regulation-toolbox-21\\_en\\_0.pdf](https://ec.europa.eu/info/sites/info/files/file_import/better-regulation-toolbox-21_en_0.pdf)

Also, the **stringency** of the regulation can significantly affect innovation activities. As argued by Stewart (2010), a gradual increase in the stringency of regulation typically minimizes the compliance burden on (especially existing) firms but results in incremental innovation and may even disincentivise innovation activity. Instead, a more radical increase in the stringency is likely to increase the compliance costs, but on the other hand, increase likelihood for more radical innovations by disrupting the existing markets.

**Reducing uncertainty** (e.g. by increasing available information) can also increase incentives to invest in the development of new innovations and reduce the probability of ineligible innovations. In some cases, regulation can also act as a quality certification for certain products. (e.g. Stewart 2010)

### Innovation-friendly implementation practices

In addition to general good enforcement practices (e.g. efficient communication of existing and future regulations, etc.), different **innovation-friendly advisory approaches** (e.g. guidelines and advisory services for companies and other innovators) or **regulatory sandboxes and other real-life testing opportunities** (e.g. test labs for autonomous vehicle) can help companies to adopt their innovations to the regulatory environment and provide regulators valuable information of emerging technologies and their impacts.

### Innovation-friendly monitoring, evaluation and learning

Given the uncertain nature of technological development and innovations, the role of systematic monitoring and ex post assessment practices are even more important. **Improving the 'evaluability' of regulations** (e.g. by introducing controlled trials and experiments) helps to provide important evidence on how regulations affect innovations and adjust the regulatory environment accordingly. Understanding 'what works' is essential for learning and iterative reflection of the regulatory framework amid rapid technological development. Ideally, agenda-setting, preparation, implementation and monitoring should be seen as parallel, rather than sequential and/or separate phases.

### Enabling innovation-friendly regulation practices

In addition to the key elements described above, enabling innovation-friendly regulation requires sufficient resources, appropriate skills and competences, willingness and mandate, as well as supportive organisational culture. Without these **enablers**, it is likely that innovation-friendly regulation remains only a theoretical concept.

## Summary of key aspects

To sum up, innovation-friendly regulation can be defined as *regulation, which supports the development and adoption of new innovations by integrating innovation perspective into all different elements of regulation*. Table 1 summarises the key objectives and example practices for each element of innovation-friendly regulation.

*Table 1. Key aspects and example practices of innovation-friendly regulation.*

Element	Key objectives	Example practices
<b>1. Innovation-friendly agenda setting</b>	<ul style="list-style-type: none"> <li>• Anticipating proactively regulatory needs for emerging industries and innovations</li> <li>• Building shared understanding of opportunities and threats</li> </ul>	<ul style="list-style-type: none"> <li>• 'Future committees &amp; transition arenas' (e.g. Komet)</li> <li>• Roadmaps for regulating emerging industries</li> </ul>
<b>2. Innovation-friendly regulation strategies</b>	<ul style="list-style-type: none"> <li>• Selecting most efficient instrument for achieving policy goals while leveraging innovation</li> <li>• Avoiding unnecessary regulations and restrictions</li> </ul>	<ul style="list-style-type: none"> <li>• Self-regulation practices, voluntary commitments (e.g. Green Deals)</li> <li>• Regulatory reforms</li> </ul>
<b>3. Innovation-friendly regulatory processes</b>	<ul style="list-style-type: none"> <li>• Ensuring broad and diverse engagement of stakeholders (especially outside incumbents)</li> <li>• Integrating innovation perspective in ex ante assessments of all regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Low-threshold engagement practices</li> <li>• Support institutions and networks</li> <li>• Guidelines and checklists for regulators (e.g. EC R&amp;I Tool)</li> </ul>
<b>4. Innovation-friendly legislation principles</b>	<ul style="list-style-type: none"> <li>• Designing flexible and adaptive (technology neutral) legislation</li> <li>• Improving the predictability and reducing uncertainty of regulatory environment</li> </ul>	<ul style="list-style-type: none"> <li>• Outcome-based regulation practices;</li> <li>• Experimentation clauses</li> </ul>
<b>5. Innovation-friendly implementation practices</b>	<ul style="list-style-type: none"> <li>• Ensuring efficient compliance and collaboration between regulators and innovators</li> <li>• Improving the eligibility of innovations with the existing regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Advisory services &amp; guidelines for companies</li> <li>• Regulatory sandboxes and test labs</li> </ul>
<b>6. Innovation-friendly monitoring and evaluation</b>	<ul style="list-style-type: none"> <li>• Improve the evaluability of innovation impacts</li> <li>• Integrate innovation perspectives into monitoring and ex post evaluation practices</li> </ul>	<ul style="list-style-type: none"> <li>• RCTs to assess innovation impacts</li> <li>• Monitoring and evaluation frameworks</li> </ul>

## Literature

Armstrong, H., Gorst, C. & Rae, J. (2019) *Renewing Regulation: 'anticipatory regulation' in an age of disruption*. Nesta.

EPSC (2016) *Towards an Innovation Principle Endorsed by Better Regulation*. EPSC Strategic Notes, Issue 14. European Political Strategy Center. [https://ec.europa.eu/epsc/sites/epsc/files/strategic\\_note\\_issue\\_14.pdf](https://ec.europa.eu/epsc/sites/epsc/files/strategic_note_issue_14.pdf);

OECD (2018) *OECD Regulatory Policy Outlook 2018*. OECD Publishing, Paris.

Stewart, L. (2010), "The Impact of Regulation on Innovation in the United States: A Cross-Industry Literature Review", Paper Commissioned by the Institute of Medicine Committee on Patient Safety and Health IT, Washington, D.C.

## Further information:

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