

# Public consultation on EMA Regulatory Science to 2025

Fields marked with \* are mandatory.

\* Name

\* Email



EUROPEAN MEDICINES AGENCY  
SCIENCE MEDICINES HEALTH

## Introduction

The purpose of this public consultation is to seek views from EMA's stakeholders, partners and the general public on EMA's proposed strategy on Regulatory Science to 2025 and whether it meets stakeholders' needs. By highlighting where stakeholders see the need as greatest, you have the opportunity to jointly shape a vision for regulatory science that will in turn feed into the wider EU network strategy in the period 2020-25.

The views being sought on the proposed strategy refer both to the extent and nature of the broader strategic goals and core recommendations. We also seek your views on whether the specific underlying actions proposed are the most appropriate to achieve these goals.

The questionnaire will remain open until June 30, 2019. In case of any queries, please contact: [RegulatoryScience2025@ema.europa.eu](mailto:RegulatoryScience2025@ema.europa.eu).

# Completing the questionnaire

This questionnaire should be completed once you have read the draft strategy document. The survey is divided into two areas: proposals for human regulatory science and proposals for veterinary regulatory science. You are invited to complete the section which is most relevant to your area of interest or both areas as you prefer.

We thank you for taking the time to provide your input; your responses will help to shape and prioritise our future actions in the field of regulatory science.

## Data Protection

By participating in this survey, your submission will be assessed by EMA. EMA collects and stores your personal data for the purpose of this survey and, in the interest of transparency, your submission will be made publicly available.

For more information about the processing of personal data by EMA, please read the [privacy statement](#).

## Questionnaire

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### Question 1: What stakeholder, partner or group do you represent:

- Individual member of the public
- Patient or Consumer Organisation
- Healthcare professional organisation
- Learned society
- Farming and animal owner organisation
- Academic researcher
- Healthcare professional
- Veterinarian
- European research infrastructure
- Research funder
- Other scientific organisation
- EU Regulatory partner / EU Institution
- Health technology assessment body
- Payer
- Pharmaceutical industry
- Non-EU regulator / Non-EU regulatory body
- Other

***Name of organisation (if applicable):***

**Question 2: Which part of the proposed strategy document are you commenting upon:**

- Human
- Veterinary
- Both

**Question 3 (human): What are your overall views about the strategy proposed in EMA's Regulatory Science to 2025?**

*Please note you will be asked to comment on the core recommendations and underlying actions in the subsequent questions.*

The strategy represents a sound exercise analysing the barriers, needs and potential solutions currently present in the European landscape. The document is clearly structured with ambitious goals that tackle the main challenges in the development of the regulatory process. The document has captured the current opinions of the main stakeholders from a holistic perspective and the analysis represents a faithful picture of the state-of-the-art in the development of regulatory science.

Some considerations that could to be taken into account for the next version are:

(i) Although the patient community is mentioned as a stakeholder with voice and opinion, the document reflects, in our view, a passive role played by the patient community that does not reflect the potential capacities of the RRI policies. This is an essential element as the patient community needs to have a deep understanding of the challenges and opportunities within the regulatory process in order to have efficient access to new therapies. Therefore, the strategy should tackle the challenge of proposing actions specifically addressed at creating a balanced knowledge within the patient community in order to manage expectations and guarantee the transparent involvement of citizens in a process that becomes a key pillar for the development of health care systems.

(ii) Although goal 5 tackles the challenge of creating an interface between the science and innovation space and the development of regulatory science, we feel that some underlying actions to specifically raise awareness of funding bodies (both at national and European level) need to be designed to guarantee that regulatory science elements (such as regulatory assessment of promising translational research) are fully integrated into the drug development process at very early stages.

(iii) The proposed closer relationship with academia as a mechanism to both advance regulatory science and support academia in gaining a greater understanding of the field is a welcome focal point. The advent of the ESFRI community, specifically those in the life sciences domain, are keen to support interaction with the academic community, acting as interlocutors, partners and advocates.

**Question 4 (human): Do you consider the strategic goals appropriate?**

Strategic goal 1: Catalysing the integration of science and technology in medicines development (h)

- Yes
- No

Strategic goal 2: Driving collaborative evidence generation – improving the scientific quality of evaluations (h)

- Yes
- No

Strategic goal 3: Advancing patient-centred access to medicines in partnership with healthcare systems (h)

- Yes
- No

Strategic goal 4: Addressing emerging health threats and availability/therapeutic challenges (h)

- Yes
- No

Strategic goal 5: Enabling and leveraging research and innovation in regulatory science (h)

- Yes
- No

**Question 5 (human): Please identify the top three core recommendations (in order of importance) that you believe will deliver the most significant change in the regulatory system over the next five years and why.**

First choice(h)

2. Support translation of Advanced Therapy Medicinal Products cell, genes and tissue-based products into patient treatments

1st choice (h): please comment on your choice, the underlying actions proposed and identify any additional actions you think might be needed to effect these changes.

With the increasing capacities of the industry to deliver more late-stage clinical and commercial ATMPs for serious diseases with high unmet medical need (e.g., T cell immunotherapies for cancer), bringing medicines to patients through optimized regulatory strategies and expedited pathways is becoming more important. However, the main bottleneck still remains at the evidence generation level. Promoting evidence generation requires strong support for research strategies in an area that probably represents the main arsenal of therapy tools for cancer, neurodegenerative disorders, rare diseases and cardiovascular pathologies. To do this, close collaboration between regulatory and funding bodies - with academic infrastructure and institutions to support in the lab process - in planning evidence generation becomes a priority.

Second choice (h)

1. Support developments in precision medicine, biomarkers and 'omics'

2nd choice (h): please comment on your choice, the underlying actions proposed and identify any additional actions you think might be needed to effect these changes.

Advances in the field of big data and omic sciences will represent a major opportunity for changing the one-size-fits-all paradigm. Personalized medicine will need in the next few years strong public and private support to leverage the current state-of-the-art and make possible the generalisation of sustainable and efficient patient-target solutions. This goal will require a proactive role from the regulatory bodies supporting public policies addressed at: (i) developing research projects to ensure the quality, completeness, validity and analysis of datasets, (ii) developing informatics, ICT and mathematics tools to integrate, analyse and extract value from databases (e.g. omics, health records, clinical data, imaging data, data from mobile devices and wearable sensors, behavioural, environmental) with specific attention on interoperability of the respective databases. This should include research to ensure the quality, completeness and validity of data.

### Third choice (h)

29. Leverage collaborations between academia and network scientists to address rapidly emerging regulatory science research questions

**3rd choice (h): please comment on your choice, the underlying actions proposed and identify any additional actions you think might be needed to effect these changes.**

The “valley of death” - the large gap between basic scientific research and translation to novel therapeutics, underscores the need to restructure education and academic research to cultivate the fertile interface between academia and industry. But this gap becomes even deeper as knowledge of the regulatory processes at early stages of the discovery pathway is still scarce. Therefore, a structural change leading to the creation of network-led partnership with academia, industry and regulatory bodies becomes an urgent priority in order to bridge these frequently isolated actors. A bridging action plan to feed iterative and interactive engagements between these stakeholders should be a core strategy of the EMA and National regulatory authorities. In this context, one essential action would be training early-career scientists in regulatory science and training research institutions, which, although they have acquired accelerated expertise in the field of innovation, are still lacking training schemes on regulatory science in their own educational portfolios.

**Question 6 (human): Are there any significant elements missing in this strategy. Please elaborate which ones (h)**

**Question 7 (human): The following is to allow more detailed feedback on prioritisation, which will also help shape the future application of resources. Your further input is therefore highly appreciated. Please choose for each row the option which most closely reflects your opinion. For areas outside your interest or experience, please**

**leave blank.**

*Should you wish to comment on any of the core recommendations (and their underlying actions) there is an option to do so.*

**Strategic goal 1: Catalysing the integration of science and technology in medicines development (h)**

	Very important	Important	Moderately important	Less important	Not important
1. Support developments in precision medicine, biomarkers and 'omics'	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Support translation of Advanced Therapy Medicinal Products cell, genes and tissue-based products into patient treatments	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Promote and invest in the Priority Medicines scheme (PRIME)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Facilitate the implementation of novel manufacturing technologies	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Create an integrated evaluation pathway for the assessment of medical devices, in vitro diagnostics and borderline products	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Develop understanding of and regulatory response to nanotechnology and new materials' utilisation in pharmaceuticals	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Diversify and integrate the provision of regulatory advice along the development continuum	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please feel free to comment on any of the above core recommendations or their underlying actions. **Kindly indicate the number of the recommendation** you are commenting on:

Besides recommendations 1 and 2, we would like to draw attention to the emerging importance of creating evaluation pathways for the assessment of medical devices (recommendation #5). The generation of evidence in this area represents a major challenge as the combination of medicines with medical devices introduces further levels of complexity in the evaluation process. A similar situation exist in the field of nanomedicines where the generation of evidence is still quite poor. Regulatory strategies must support actions generating evidence and recruit experts to create an adaptable regulatory framework that facilitates a sound, fair, efficient and sustainable implementation of these products.

Overall comment for strategic goal #1. This overall process of catalysing science and technologies in the drug development process requires the active participation of "bridging" mechanisms that will screen needs and opportunities at all levels of the value chain. Along this line Research Infrastructures play a fundamental role in the advancement of knowledge and technology in research and drug development at different levels of the value chain. These organisations follow a model of "distributed infrastructure", which creates a stable network of capacities grouping a wide diversity of stakeholders who seek solutions to the many problems that we face in the development of new therapies. All together, they represent a strong network of scientific knowledge and expertise in the efficient development of the drug development value chain. These type of organisations represent a powerful ally in the process of creating stable bridging tools integrating science and technology in the drug development process.

**Strategic goal 2: Driving collaborative evidence generation – improving the scientific quality of evaluations (h)**

	Very important	Important	Moderately important	Less important	Not important
8. Leverage novel non-clinical models and 3Rs	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Foster innovation in clinical trials	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Develop the regulatory framework for emerging digital clinical data generation	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. Expand benefit-risk assessment and communication	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Invest in special populations initiatives	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Optimise capabilities in modelling and simulation and extrapolation	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Exploit digital technology and artificial intelligence in decision-making	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please feel free to comment on any of the above core recommendations or their underlying actions. **Kindly indicate the number of the recommendation you are commenting on:**

**Strategic goal 3: Advancing patient-centred access to medicines in partnership with healthcare systems (h)**

	Very important	Important	Moderately important	Less important	Not important
15. Contribute to HTAs' preparedness and downstream decision-making for innovative medicines	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Bridge from evaluation to access through collaboration with Payers	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Reinforce patient relevance in evidence generation	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Promote use of high-quality real world data (RWD) in decision-making	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Develop network competence and specialist collaborations to engage with big data	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Deliver real-time electronic Product Information (ePI)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Promote the availability and uptake of biosimilars in healthcare systems	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Further develop external communications to promote trust and confidence in the EU regulatory system	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please feel free to comment on any of the above core recommendations or their underlying actions. **Kindly indicate the number of the recommendation you are commenting on:**

Recommendation #15. HTA expertise for performing relative effectiveness assessment of novel therapy solutions represents a key element for the implementation of novel therapies. The strategy acknowledges the importance of discussing (we would prefer the term "co-creating") with HTA bodies, guidance and methodologies for evidence generation and review. Along this line, specific programs for HTA assessment in

the field of ATMPs and medical devices should be developed and implemented. Impact assessment should also be developed in routine evaluations of benefit-risk.

Recommendation #17. RRI policies should be mentioned in the strategy as they provide the framework for enhancing patient involvement in EMA or national regulatory authorities. We recommend introducing the concept "co-creation" when patients are involved in the decision-making process as they become transformative agents of the process.

Recommendation #21. The use and extension of biosimilars faces challenges related to resilience of the health care providers and lack of public trust. The strategy recommends develop further strategic campaigns. This should be done not "for" the patient organisations but "with" the patient organisations. Again, an extension of RRI policies to develop strategies of co-creation with the "target" recipient of the communication action.

#### Strategic goal 4: Addressing emerging health threats and availability/therapeutic challenges (h)

	Very important	Important	Moderately important	Less important	Not important
23. Implement EMA's health threats plan, ring-fence resources and refine preparedness approaches	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Continue to support development of new antimicrobials and their alternatives	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. Promote global cooperation to anticipate and address supply challenges	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. Support innovative approaches to the development and post-	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

authorisation monitoring of vaccines					
27. Support the development and implementation of a repurposing framework	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please feel free to comment on any of the above core recommendations or their underlying actions. **Kindly indicate the number of the recommendation you are commenting on:**

**Strategic goal 5: Enabling and leveraging research and innovation in regulatory science (h)**

	Very important	Important	Moderately important	Less important	Not important
28. Develop network-led partnerships with					

academia to undertake fundamental research in strategic areas of regulatory science	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. Leverage collaborations between academia and network scientists to address rapidly emerging regulatory science research questions	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. Identify and enable access to the best expertise across Europe and internationally	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. Disseminate and share knowledge, expertise and innovation across the regulatory network and to its stakeholders	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please feel free to comment on any of the above core recommendations or their underlying actions. **Kindly indicate the number of the recommendation you are commenting on:**

Overall, we think this goal represents one of the major pillars of the EMA strategy as it tackles the initial bottleneck that reduces the potential impact of regulatory science in an efficient process of drug development, which is the generation of scientific evidence while building a thorough value chain. Although the ERA and the National Roadmaps have fully incorporated, with a variable level of success, strategic pillars focused on innovation strategies, integration of regulatory science into the research value chain remains far from being widely adopted.

The strategy sets out the need to identify needs in consultation with academia and engage with funding bodies to propose or issue calls and establish research collaborations. We believe that a specific underlying action should be added to this recommendation, to create with these stakeholders regulatory science priorities to be incorporated into national and European calls, particularly in the field of novel therapies. Also specific educational schemes for regulatory science should be promoted by EMA with educational postgraduate institutions and research institutions to provide educational tools to research communities. A strong focus here should be on early career scientists, complementing other priority needs for the optimum development of the research value chain such as the capacities of big data in the R&D pipeline. Along this line, we and others are deeply concerned about the lack of experts in regulatory science within research institutions responsible for the development of the European research agenda. In this context, a specific recommendation to tackle this barrier should be introduced in the strategy.

Thank you very much for completing the survey. We value your opinion and encourage you to inform others who you know would be interested.

### **Useful links**

[EMA website: Public consultation page \(https://www.ema.europa.eu/en/regulatory-science-strategy-2025\)](https://www.ema.europa.eu/en/regulatory-science-strategy-2025)

### **Background Documents**

[EMA Regulatory Science to 2025.pdf](#)

### **Contact**

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