# API framework self-assessment maturity tool for governments

Fields marked with * are mandatory.

## The API framework for governments

The overall implementation of the framework includes the following steps:

- The guideline with the framework description should be read to understand why and how the framework was generated, its importance, its structure and the description of each of the twelve proposals that form the framework.
- In the guideline and for each proposal, a list of additional best practices documents could also be consulted.
- This online tool can be used to self-assess the adoption of the framework
- Based on the results of the self-assessment, a gap analysis should be performed and the related change management process should then be put in place.
- While adopting the framework, the impact of the change management process should be measured.
- The process could be periodically repeated to refine and review additional changes required for a complete adoption of APIs in the organisation.

## Your details

Name

Surname

Email

Name of your organisation

Country of your organisation

- Austria
- Belgium

- Bulgaria
- Croatia
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Iceland
- Ireland
- Italy
- Latvia
- Liechtenstein
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Norway
- Poland
- Portugal
- Romania
- Slovak Republic
- Slovenia
- Spain
- Sweden
- Switzerland
- United Kingdom
- International
- Other (specify)

Your job position

* Your role in your organisation

- Administrative (e.g. financial lifecycle manager)
- Managerial (e.g. project or program manager)
- Political (e.g. policy maker)
- Technical (e.g. software architect)
- Other (please specify)

* Your goal using the tool this time is:

- Just testing it, curious about it,  trying it, etc...

- Real self-assessment of the framework in your organisation

## Build your framework

Even if the framework has been thought as a whole, only some of the proposals can be assessed to build your custom tool. Each proposal is made of a checklist of maximum 10 questions.

Please also notice that the sequence of implementation of the proposals is not rigid.

| **Strategic proposals** | Add checklist to self-assess |
|---|---|
| 1. Align APIs with policy goals | |
| 2. Define the government platform vision | |
| 3. Create governance structures | |
| 4. Form guiding principles for API processes | |

| **Tactical proposals** | Add checklist to self-assess |
|---|---|
| 5. Design metrics and prioritise APIs | |
| 6. Harmonise platform and ecosystems assets | |
| 7. Establish cross-competency teams | |
| 8. Follow an API product approach | |

| **Operational proposals** | Add checklist to self-assess |
|---|---|
| 9. Measure policy impacts of APIs | |
| 10. Build API platform components | |
| 11. Appoint API product manager(s) and teams | |
| 12. Adopt an API lifecycle approach | |

**Description:** Align APIs adoption to achieve key government policies, strategies and overall plans and consider whether APIs will help achieve the stated policy goals.
**Application level:** Strategic
**Pillar:** Policy support
**Strength of evidence:** Private industry learnt that a use case approach to APIs leads to complexity and duplication. Private industry found that cohesive action required an API-first approach to be supported by

senior management and decision-makers. Plans need to consider if management golas, that implement policy goals, should be supported by introducing APIs. In this case, APIs must be aligned to policy goals. Several governments are now moving towards this model, but it is a relatively new approach.

**Description**: Explore and confirm on the government vision on a whole-of-government digital platform. This will assist when building stakeholder relationships and setting API priorities.
**Application level**: Strategic
**Pillar**: Platforms and ecosystems
**Strength of evidence**: Evidence from implementations of digital transformation in government suggests that a lack of clarity on the platform model being adopted by a given government can hamper efforts to build collaborative approaches across government operations and with external stakeholders.

* Q2.1: (Organisational Infrastructure) Is there a vision/strategic plan in place with clear government goals?
  - No
  - Partially
  - I do not know
  - Planned
  - Yes/Fully

* Q2.2: (Organisational Infrastructure) Has the government envisioned the IT infrastructure that could be introduced to support this platform vision?
  - No
  - Partially
  - I do not know
  - Planned
  - Yes/Fully

* Q2.3: (Organisational infrastructure) Is there internal agreement on how to harness various stakeholder roles in an API-enabled, digital environment?
  - No
  - Partially
  - I do not know
  - Planned
  - Yes/Fully

* Q2.4: (Organisational leadership) Is there agreement on the level of engagement and partnership government decision-makers will have with external stakeholders?
  - No
  - Partially
  - I do not know
  - Planned
  - Yes/Fully

* Q2.5: (Resource allocation) Has the government allocated resources (budget and staff) to support the work of various stakeholders (i) internally, (ii) between departments and, (iii) where identified as desirable, with external stakeholders?
  - No
  - Partially
  - I do not know
  - Planned
  - Yes/Fully

* Q2.6: (Resource allocation) Are common data and service sharing agreements considered by stakeholders?
  - No
  - Partially
  - I do not know
  - Planned
  - Yes/Fully

* Q2.7: (Skills) Are policy stakeholders with responsibility for key goals well informed as to where APIs could play a role in helping achieve outcomes by using a platform approach?
  - No
  - Partially
  - I do not know

Planned Yes/Fully

* Q2.8: (Skills) Are government leaders acting in ecosystem facilitation, external collaboration, and managing data sharing agreements with external contractors and in B2G relationships?

No Partially I do not know
Planned Yes/Fully

* Q2.9: (Metrics) Can the government measure the levels of engagement in digital ecosystems and identify groups that are under-represented from participating?

No Partially I do not know
Planned Yes/Fully

Please help us to improve the tool with your feedback and an explanation of your answers for this proposal

**Description:** Establish governance structures to ensure that APIs align with policy and ecosystem priority use cases, address security threats and risks, review equity impacts, and use standards and agreed style guidelines.
**Application level:** Strategic
**Pillar:** Policy support
**Strength of evidence:** Evidence shows that governments have experience in building effective data governance using information management frameworks. Some governments are now applying those principles to API governance. While these processes are emerging, there is limited documented evidence describing effective operationalisation of governance processes within government. Industry is also at a similar stage of early maturity.

* Q3.1: (Organisational infrastructure) Is there a structure in place at both whole-of-government and departmental levels that supervises the following aspects?

- **Overall oversight**: Decides membership of each governance committee and sets reporting requirements to ensure alignment and consistency across all governance committees within the government's structures and alignment with policy and strategic goals
- **Strategy & Interoperability**: Oversees digital strategy and API framework implementation (setting priorities, modernising infrastructure, reviewing annually against changing digital landscape, ensuring alignment with other interoperability and digital transformation agenda)
- **Cybersecurity**: Oversees implementation of cybersecurity best practices including policies on identity management and access permissions to data and services and regular monitoring and updating of best practices
- **Risk and Operations**: Creates technology to support the development and exposure of APIs across government; creates and collaborates on holistic API design standards; reviews new integrations and ensures they comply with these standards and design guidelines; and oversees legal and compliance risk requirements at whole-of-government, departmental, program and project levels
- **Information Management**: Oversees data management, data interoperability, data sharing and data protection

No Partially I do not know
Planned Yes/Fully

* Q3.2: (Organisational infrastructure) Is there a structure in place at both whole-of-government and departmental levels that provide oversight of user needs to ensures the API framework's roadmap will be able to meet consumer needs in the future, with regular assessments of internal, partner and external stakeholder API consumption and collaboration needs and of co-creation efforts with partners?

No Partially I do not know
Planned Yes/Fully

* Q3.3: (Organisational infrastructure) Does each committee have:

- Reporting structure/oversight structure
- Membership and attendance list
- Terms of Reference
- Standard agenda
- Regular schedule of meeting dates
- Agreed set of standard procedures including standards used, internal API style guidelines, accreditation/review process, etc that can be used to assess new and existing API initiatives
- Checklists/tools based off procedures for assessing new API initiatives
- Checklists/tools based off procedures for monitoring existing API initiatives?

No Partially I do not know
Planned Yes/Fully

* Q3.4: (Organisational infrastructure) Is there an organisational chart or map that shows how all governance committees are related and how decisions are overseen and communicated to whole-of-government leadership?

No Partially I do not know
Planned Yes/Fully

* Q3.5: (Organisational leadership) Is there an executive level leader to champion the importance of governance and to ensure the work of governance committees is implemented and monitored?

No Partially I do not know
Planned Yes/Fully

* Q3.6: (Resource allocation) Are there clear funding mechanisms for governance?

No Partially I do not know
Planned Yes/Fully

* Q3.7: (Resource allocation) Are there budget and resources available for consultation, training and support of departments and external stakeholders to ensure alignment with governance requirements and to improve overall literacy around APIs?

No Partially I do not know
Planned Yes/Fully

* Q3.8: (Skills - Policy) Do members of the governance committee have a leadership position and advocate for API initiatives?

No Partially I do not know
Planned Yes/Fully

* Q3.9: (Skills - Technical) Collectively, do members of governance committees have skills in:

- Cybersecurity
- Compliance/regulation/legal risks
- Risk assessment and management
- Strategic policy
- Enterprise architecture or/and API design
- Internal API standardisation policies
- Ecosystem user needs and external stakeholder liaison?

No Partially I do not know
Planned Yes/Fully

* Q3.10: (Metrics) Does the governance committee regularly monitor and manage risks that have or may emerge from the detrimental impacts of API adoption?

No Partially I do not know
Planned Yes/Fully

Please help us to improve the tool with your feedback and an explanation of your answers for this proposal

**Description**: Collect together a government's existing principles in digital service delivery, technology selection, data privacy, and cybersecurity. This will be useful to have at hand when allocating resources or designing API activities and implementations.
**Application level**: Strategic
**Pillar**: Processes
**Strength of evidence**: Governments are fairly advanced at documenting core principles that guide their operations. Strong evidence exists to demonstrate the value in ensuring that all stakeholders are able to reflect and design activities that align with organisational principles.

* Q4.1: (Organisational Infrastructure) Has an overarching body that sets IT core principles for digital government, digital services, cybersecurity, data privacy, and/or technology choices?

No Partially I do not know
Planned Yes/Fully

* Q4.2: (Organisational leadership) Is there an ambassador role working across government promoting awareness of principles to departments and stakeholders?

No Partially I do not know
Planned Yes/Fully

* Q4.3: (Resource allocation) Are mechanisms in place to review new projects/products/ outputs to ensure adherence to principles?

No Partially I do not know
Planned Yes/Fully

* Q4.4: (Skills) Are all departments and digital service stakeholders in each department aware of the principles?

No Partially I do not know
Planned Yes/Fully

* Q4.5: (Skills) Are there practical user guides and tools available to help product managers and technical leaders to ensure that principles are upheld in design and delivery of API-related activities?

No Partially I do not know
Planned Yes/Fully

* Q4.6: (Metrics) Are the principles reflected in metrics collection and reporting?

No Partially I do not know
Planned Yes/Fully

Please help us to improve the tool with your feedback and an explanation of your answers for this proposal

**Description**: In partnership with stakeholders, identify a priority order for the government's API-related activities. Define how success will be measured for each activity area. Ensure that metrics are focused on measuring the value being created, and on monitoring whether any adverse equity impacts are being introduced.
**Application level**: Tactical
**Pillar**: Policy support
**Strength of evidence**: Governments have mature experience in prioritising workloads within limited resources and budgetary constraints. This includes working at whole-of-government and departmental levels on setting priorities. There is limited evidence of governments sharing departmental budgets to reuse digital components or datasets across government. There is a small amount of evidence of governments using metrics to calculate the value that APIs are generating. This is also true for private industry, where the measurement of the value that APIs are creating (apart from monetised APIs) is limited.

* Q5.1: (Organisational Infrastructure) Are KPIs identified for each of the policy goals identified in proposal 1 for which it was decided APIs could assist in supporting?

No Partially I do not know
Planned Yes/Fully

* Q5.2: (Organisational Infrastructure) Are KPIs identified for each of these API activities?

No Partially I do not know
Planned Yes/Fully

* Q5.3: (Organisational leadership) Are there clear milestones and timelines in place for each policy goal and related departmental API activity?

No Partially I do not know
Planned Yes/Fully

* Q5.4: (Organisational leadership) Are resources allocated to conduct measures at a whole of government and at departmental levels?

No Partially I do not know
Planned Yes/Fully

* Q5.5: (Resource allocation) Are internal use cases for APIs prioritised?

No Partially I do not know
Planned Yes/Fully

* Q5.6: (Metrics) Are resources in place to ensure that priority API-activities are completed in order?

No Partially I do not know
Planned Yes/Fully

* Q5.7: (Skills) Do decision makers and departmental leaders agree on the actions to take and in what priority order?

No Partially I do not know
Planned Yes/Fully

* Q5.8: (Skills) Is research being conducted across government to create standardised ways to calculate the value of APIs in contributing to specific goals?

No Partially I do not know
Planned Yes/Fully

* Q5.9: (Metrics) Are there mechanisms in place to monitor risks, course-correct, and reorient API activities based on regular metrics reporting and analysis?

No Partially I do not know
Planned Yes/Fully

Please help us to improve the tool with your feedback and an explanation of your answers for this proposal

**Description**: Foster the establishment of domain-area ecosystems with relevant stakeholders. Build platform components that can be used by whole-of-government. Build components that can be used by domain-level ecosystems and by individual departments.
**Application level**: Tactical
**Pillar**: Platforms and ecosystems
**Strength of evidence**: API platforms require a range of stakeholders to agree on set of minimal common choices to enhance interoperability (including to adhere to common API standards, considering which

shared data models must be commonly defined, define common architectural choices) and which service components can be reused and, sometimes, even the use of common tools.

* Q6.1: (Organisational infrastructure) Does government have a clear vision of how internal and external stakeholders should be engaged in an ecosystem approach?

No Partially I do not know
Planned Yes/Fully

* Q6.2: (Organisational infrastructure) Has the government identified priority domain ecosystems to work with and established a mechanism to enable participation of stakeholders?

No Partially I do not know
Planned Yes/Fully

* Q6.3: (Organisational infrastructure) Is there a mechanism to ensure ecosystem work is cohesive and coordinated between ecosystems and with the government's wider API activities?

No Partially I do not know
Planned Yes/Fully

* Q6.4: (Organisational leadership) Is the appointed IT leader managing a documented enterprise architecture design pattern to enable API activities and encourage reuse, integration and interoperability?

No Partially I do not know
Planned Yes/Fully

* Q6.5: (Organisational leadership) Is there an appointed information management leadership ensuring data models, data interoperability, data sharing and data protection are coordinated consistently across government?

No Partially I do not know
Planned Yes/Fully

* Q6.6: (Resource allocation) Has government set priorities for identifying, creating and sharing data assets with APIs (including dynamic, high value datasets when available)?

No Partially I do not know
Planned Yes/Fully

* Q6.7: (Resource allocation) Has government set priorities for identifying and building shared services capabilities across government?

No Partially I do not know
Planned Yes/Fully

* Q6.8: (Skills - Policy) Are ecosystem members and government representatives supported to build their API skills, including in the importance and opportunity of using API standards, design thinking, and business model co-creation?

No Partially I do not know
Planned Yes/Fully

* Q6.9: (Skills - Technical) Does the government's enterprise architecture enable deployment of an API gateway and developer portal/API catalogue?

No Partially I do not know
Planned Yes/Fully

* Q6.10: (Metrics) Are measurements used to drive discussions on new funding models and on efficiencies generated from collaborative action?

No Partially I do not know
Planned Yes/Fully

Please help us to improve the tool with your feedback and an explanation of your answers for this proposal

**Description**: All teams with responsibilities for managing APIs will require a range of skills including policy and program understanding, product management, technical implementation skills, and community management and evaluation skills. Implementing government API activities requires a greater focus on collaborative capabilities, ecosystem facilitation, the ability to measure the value being generated, and design thinking skills.
**Application level**: Tactical
**Pillar**: People
**Strength of evidence**: There is strong evidence from both government and private industry arguing that multi-disciplinary teams are best equipped to manage API-related activities.

* Q7.1: (Organisational Infrastructure) Do policy, programme and IT teams meet regularly to oversee creation of the government's digital products, services and API activities?

No Partially I do not know
Planned Yes/Fully

* Q7.2: (Organisational leadership) Do policy, programme and IT teams assess user needs alongside organisational policy goals to continually refine priorities?

No Partially I do not know
Planned Yes/Fully

* Q7.3: (Organisational leadership) Are champions identified in both programme and IT teams to encourage API-first approaches?

No Partially I do not know
Planned Yes/Fully

* Q7.4: (Organisational leadership) Do departmental leaders and decision makers work with policy and programme staff to take an API-first and product approach to managing APIs?

No Partially I do not know
Planned Yes/Fully

* Q7.5: (Resource allocation) Do policy-makers, programme and IT teams members attend any established ecosystem network meetings?

No Partially I do not know
Planned Yes/Fully

* Q7.6: (Resource allocation) Has government set priorities for identifying and building shared services capabilities across government?

No Partially I do not know
Planned Yes/Fully

* Q7.7: (Skills) Do policy stakeholders within government inform sufficiently to help guide programme activities towards using APIs where appropriate?

No Partially I do not know
Planned Yes/Fully

* Q7.8: (Skills) Are all programme teams able to design and deliver APIs where appropriate?

No Partially I do not know
Planned Yes/Fully

* Q7.9: (Metrics) Are measurements reported, shared and discussed during joint meetings between policy, programme and IT teams?

No Partially I do not know
Planned Yes/Fully

Please help us to improve the tool with your feedback and an explanation of your answers for this proposal

**Description**: Governments need to allocate resources to manage APIs as ongoing assets in a programmatic way. As governments moves toward a platform model, more stakeholders will grow reliant on government APIs to create and provide products and services. These products and services will need to be confident that the government APIs they are using as ‘raw goods’ are available and working as expected. An API product approach ensures government departments allocate the resources and systems necessary to build this ecosystem confidence and ensure value is generated from APIs.
**Application level**: Tactical
**Pillar**: Processes
**Strength of evidence**: Strong evidence from private industry advocates for the use of API as a product approach. Workshop feedback and key informant interviews warned against governments under-resourcing APIs as pilot and one-off projects, as it limits economic opportunity and growth for external stakeholders. There are growing examples of governments taking a product approach, particularly in statistics, transport, and weather API delivery. However, these are still fairly limited and are often resourced at a minimum acceptable level and do not fully demonstrate the potential value creation that can be harnessed by resourcing APIs adequately.

* Q8.1: (Organisational infrastructures) Are there plans and processes in place to manage new use case and feature requests, service interruptions and to manage security breaches?

No Partially I do not know
Planned Yes/Fully

* Q8.2: (Organisational leadership) Are licensing agreements in place for each API including internal, partner and external-facing APIs, and are service level agreements in place and monitored regularly?

No Partially I do not know
Planned Yes/Fully

* Q8.3: (Resource allocation) Are government APIs that have been created for external use also used for internal use when accessing data or services?

No Partially I do not know
Planned Yes/Fully

* Q8.4: (Resource allocation) Are support services including a dedicated email, ticketing system and help desk available for API consumers?

No Partially I do not know
Planned Yes/Fully

* Q8.5: (Skills) Does each API have service level objectives that define expected standards of performance for internal stakeholders and, when opened to wider audiences, how they are expected to perform and be used when exposed to third parties?

No Partially I do not know
Planned Yes/Fully

* Q8.6: (Skills) Is there good documentation in place for each API which answers the following questions:

- What can I do (and not do) with this API?
- How do I secure the API?
- How long will it take to get started?
- What API endpoints and event integrations does the API offer?

No Partially I do not know
Planned Yes/Fully

* Q8.7: (Skills) Are user personas and use cases documented and prioritised for each API?

No Partially I do not know
Planned Yes/Fully

* Q8.8: (Skills) Are APIs discoverable through a variety of means relevant to each user persona?

No Partially I do not know
Planned Yes/Fully

* Q8.9: (Metrics) Are errors, usage patterns, onboarding and retention processes monitored to support engagement and are these compared and reported against priority use case and user persona needs?

No Partially I do not know
Planned Yes/Fully

* Q8.10: (Metrics) Are API activity monitoring and metric systems embedded into regular program operational approaches?

No Partially I do not know
Planned Yes/Fully

Please help us to improve the tool with your feedback and an explanation of your answers for this proposal

**Description**: The value of APIs needs to be measured in an ongoing and transparent manner in the same way that any government program must be monitored to ensure it is performing as expected and creating value for citizens, businesses and the environment. APIs should be measured to ensure they are performant, are delivering value for government and for ecosystem stakeholders, and that they are not inadvertently causing any harms or widening inequality.
**Application level**: Policy support
**Pillar**: Operational
**Strength of evidence**: While there is sufficient evidence to demonstrate how to monitor APIs from a technical aspect, there are few examples beyond one-off, specific research studies that measure the efficiency and policy value being generated by APIs. Private industry also offers fairly weak evidence as their focus is predominantly on revenue generation metrics and on API technical performance metrics. Industries including banking, weather, and transport have yet to create standard systems to measure the value being generated by open APIs.

* Q9.1: (Organisational infrastructure) Have the order of implementation of API activities for the whole of government and for each department been prioritized?

No Partially I do not know
Planned Yes/Fully

* Q9.2: (Organisational leadership) Do departmental leaders regularly consult policy stakeholders to review metrics to ensure that API activities are enabling policy goals to be achieved?

No Partially I do not know
Planned Yes/Fully

* Q9.3: (Resource allocation) Are processes in place to ensure metrics are standardised wherever possible for API activities and regularly collected, reported and analysed, and that corrective actions are implemented, where necessary?

No Partially I do not know
Planned Yes/Fully

* Q9.4: (Skills) Is there an understanding and use of output, outcome and impact indicators to measure API activities?

No Partially I do not know
Planned Yes/Fully

* Q9.5: (Skills) Are metrics systems, analysis and reporting processes automated across the organisation?

No Partially I do not know
Planned Yes/Fully

* Q9.6: (Metrics) Are metrics able to identify potential differential impacts for particular stakeholders?

No Partially I do not know
Planned Yes/Fully

Please help us to improve the tool with your feedback and an explanation of your answers for this proposal

**Description**: At a strategic level, the government's platform model has been defined. At a tactical level, the government's common platform components and ecosystem stakeholders have been mapped. Now, at an implementation level, platform components are built and operationalised. This includes supports such as API style guidelines, and documented infrastructural design patterns.
**Application level**: Operational
**Pillar**: Platforms and ecosystems
**Strength of evidence**: There is strong evidence from government that documenting infrastructural design patterns and mandating common API style guidelines helps to create future-proofed, robust API infrastructure. This is also a common practice in private industry

* Q10.1: (Organisational infrastructure) Are governance structures in place that assess new APIs against internal API style guidelines?

No Partially I do not know
Planned Yes/Fully

* Q10.2: (Organisational infrastructure) Is there oversight of how authorisation, identity management and access permission rights are managed alongside oversight of the handling of sensitive data, data protection, audit and fraud detection?

No Partially I do not know
Planned Yes/Fully

* Q10.3: (Organisational leadership) Does IT leadership have an API-enabled enterprise architecture model documented that promotes coherence, innovation and efficiency?

No Partially I do not know
Planned Yes/Fully

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Q10.4: (Resource allocation) Is there an IT/enterprise architecture modernisation strategy that has identified cost-benefit analysis for when to keep legacy APIs and when to build RESTful APIs?

- No
- Partially
- I do not know
- Planned
- Yes/Fully

* Q10.5: (Skills - Policy) Do policy decision makers understand the value of APIs in helping achieve policy goals enough to resource IT architectural modernisation efforts?

- No
- Partially
- I do not know
- Planned
- Yes/Fully

* Q10.6: (Skills - Technical) Is a work programme to modernise and implement enterprise architectural changes that enable APIs in place and being implemented by IT teams?

- No
- Partially
- I do not know
- Planned
- Yes/Fully

* Q10.7: (Skills - Technical) Have API style guidelines been documented and agreed upon?

- No
- Partially
- I do not know
- Planned
- Yes/Fully

* Q10.8: (Metrics) Is performance data on enterprise architecture's capacity to manage API usage efficiently collected and monitored?

- No
- Partially
- I do not know
- Planned
- Yes/Fully

* Q10.9: (Metrics) Is API usage measured to analyse the need for evolution in enterprise architecture?

- No
- Partially
- I do not know
- Planned
- Yes/Fully

Please help us to improve the tool with your feedback and an explanation of your answers for this proposal

**Description**: Product managers, or owners, are needed to ensure APIs can be managed as an ongoing resource within government. These program leads are responsible for ensuring that APIs are usable and accessible, and that they align with policy and ecosystem goals. Product managers are also usually responsible for identifying potential improvements to an API, and facilitate discussion between users and the engineers creating and managing the technical aspects of APIs.
**Application level**: Operational
**Pillar**: People
**Strength of evidence:** Both government and private industry stress the importance of appointing product managers to 'own' each API so that they are delivering the value that is expected. This also ensures sustainability in the resources used for the API creation and ongoing resourcing.

*

Q11.1: (Organisational infrastructure) Do governance structures at departmental and whole-of-government levels monitor service level agreements, activity and usage of APIs (that is, what APIs are used for, and what value they generate, not just usage and performance statistics)?

- No
- Partially
- I do not know
- Planned
- Yes/Fully

* Q11.2: (Organisational Infrastructure) Is there a structure in place for ensuring that APIs are performant and meet service level objectives across the organisation?

- No
- Partially
- I do not know
- Planned
- Yes/Fully

* Q11.3: (Organisational leadership) Is each API managed by an owner and/or team?

- No
- Partially
- I do not know
- Planned
- Yes/Fully

* Q11.4: (Organisational leadership) Do departmental leaders and decision-makers work with policy and programme staff to take an API-first and product approach to managing APIs?

- No
- Partially
- I do not know
- Planned
- Yes/Fully

* Q11.5: (Resource allocation) Are all APIs budgeted and resourced for ongoing use (as programme/product budgets), including budgeting and resourcing for a product manager and associated tooling (for example, a documentation portal)?

- No
- Partially
- I do not know
- Planned
- Yes/Fully

* Q11.6: (Resource allocation) Are APIs resourced as ongoing programme elements (not as pilots or projects)?

- No
- Partially
- I do not know
- Planned
- Yes/Fully

* Q11.7: (Skills) Do department leaders understand the implications and importance of:

  - Identifying and prioritising key use cases for the specific API
  - Setting service level objectives
  - Identifying appropriate licensing arrangements on accessing APIs, source code and the underlying dataset?

- No
- Partially
- I do not know
- Planned
- Yes/Fully

* Q11.8: (Skills technical) Are error messages for each API explicit and do they guide action with appropriate links to documentation?

- No
- Partially
- I do not know
- Planned
- Yes/Fully

Please help us to improve the tool with your feedback and an explanation of your answers for this proposal

**Description**: An API lifecycle approach ensures that APIs are well designed, meet policy and program needs, have been tested to ensure they work, perform as expected, are secure and are efficient.
**Application level**: Operational
**Pillar**: Policy support
**Strength of evidence:** There is strong evidence that an API life cycle approach is the most efficient, sustainable and effective way to design, create and manage APIs in both government and private industry.

* Q12.1: (Organisational infrastructure) Are governance structures in place to ensure new APIs adhere to internal guidelines and agreed use of standards?

No Partially I do not know
Planned Yes/Fully

* Q12.2: (Organisational leadership) Are APIs overseen by a product owner working in partnership with a technical lead who together regularly review performance, usage, value generation and alignment with policy and use case priorities?

No Partially I do not know
Planned Yes/Fully

* Q12.3: (Resource allocation) Are agile methodologies considered, and adopted where appropriate?

No Partially I do not know
Planned Yes/Fully

* Q12.4: (Skills - Policy) Are API lifecycle/style guidelines used to create APIs consistently and covering: strategy, design, documentation, development, testing, deployment, security, monitoring, discovery and promotion, and change management of APIs?

No Partially I do not know
Planned Yes/Fully

* Q12.5: (Skills - Technical) Does each API have a metadata description in a standardised format (for example, OAS for REST APIs, AsyncAPIs for Event Driven Architectures APIs, ISO19119 for OGC services and WSDL for WS*-based architectures)?

No Partially I do not know
Planned Yes/Fully

* Q12.6: (Skills - Technical) Are appropriate authentication, authorisation, cybersecurity and data privacy risks identified and addressed for each API?

No Partially I do not know
Planned Yes/Fully

* Q12.7: (Skills - Technical) Are continuous integration/continuous delivery (CI/CD) processes in place and automated, where possible and in line with risk profiles?

No Partially I do not know
Planned Yes/Fully

* Q12.8: (Skills - Technical) Are clear API versioning and deprecating policies in place?

No Partially I do not know
Planned Yes/Fully

* Q12.9: (Metrics) Are error messages for each API explicit and guide action with appropriate links to documentation?

No Partially I do not know
Planned Yes/Fully

* Q12.10: (Metrics) Is API performance and usage data monitored regularly?

No Partially I do not know
Planned Yes/Fully

Please help us to improve the tool with your feedback and an explanation of your answers for this proposal

## General suggestions

Regarding the related implementing actions, where possible, it is recommended to do last those elements that scored lowest with either “no” or “planned”, as best practices suggest that API activities are more successful when there is evidence of quick success through achieving “low hanging fruit” wins. It is therefore suggested to:

- Focus 20% of time on no’s
- Focus 50% of time on partially (low-hanging fruit?)
- Focus 30% of time on planned

Rationale: Work that has not commenced “No’s” usually reflect the most challenging work to be done. It is difficult to devote too much time to new work areas in an immature sector like government APIs, as there is not yet sufficient organisational knowledge or mechanisms at present to try untested methods (as concluded in the APIs4DGov literature review). Evidence shows that industry success with APIs comes from commencing with lower risk work where there is already some momentum and organisational desire to progress. This is reflected in the responses which as marked as “partially”, which often represents low hanging fruit where stakeholders are already on board, and ”planned”, where internal decision-makers have agreed to allocate budget and resources to act. By spending the majority of the available time on those answered ‘partially’ and a third of time on planned tasks, a government is working to demonstrate and build on early successes and using this to drive new activities. In part, this also reflects the S-pattern curve of

innovation model , and reflects best practices in bimodal IT architecture modernisation processes in which legacy systems are maintained and supported while also advancing the introduction of new, more flexible technologies and processes.

A rationale is then provided for what order actions would best be taken for each proposal, based off the best practice literature review, expert experience with private and public companies, and stakeholder interviews and discussions held throughout the APIs4DGov project.

Please help us to improve the framework with your feedback

## Useful links

The APIs4DGov study (https://ec.europa.eu/digital-single-market/en/news/new-study-digital-government-apis-apis4dgov-project)

## Background Documents

e-Service privacy statement

## Contact

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