API strategies and use in governments

> Fields marked with * are mandatory.

Introduction

In January 2018, the European Commission's DG CONNECT and the Joint Research Centre (JRC) of the European Commission launched the APIs4DGov study. The aim of the study is to gain an understanding of the current use of Application Programming Interfaces (APIs) in digital government and their added value for public services. Within the study, the JRC is conducting this survey about API strategies and implementation activities.

You are kindly invited to participate in this survey, which is aimed at those responsible for API strategies or particular projects implementing or using APIs and those who are considering implementing or using APIs. You will be asked about your views and experience, as well as possible pan-European action on this topic.

The results of the survey will support the APIs4DGov study to understand the state-of-the-play of government APIs across the EU and the goals, benefits and risks in their use.

The survey is divided into three parts:

1. API strategies at different levels of government in your country;
2. API implementation projects, either as part of a broader strategy or standalone;
3. Potential EU action on APIs.

The first twenty contributors from the EU public sector that will fill the questionnaire before the 15 May 2019 and are interested in participating to the APIdays in Helsinki, will have the possibility to receive a free passcode (see how at the end of the questionnaire).

We will collect data from the survey till 31/10/2019.

Please note, that the data collected by this survey are under the e-Service privacy statement of this page. By clicking on the "Next" option below you confirm that you have read the documents and accept their terms.

Your details

*Name (s)

[   ]

*Surname(s)

[   ]

*Email address we can use to contact you

[   ]

*What is the name of your organisation, department or agency?

[   ]

Organisation home page.

Please indicate the link to the organisation or specific department (include http:// or https://).

[   ]

*Which is the administrative level of your organisation?

○ International   ○ National   ○ Regional   ○ Local

*Country of your organisation.

Please indicate the country where your organisation is based or "select International" in case it is an international organisation (including the EU institutions).

○ 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)

Other Country

[   ]

*What is your job title?

[   ]

*What type of role do you hold in your organisation?

- ◉ Political   ◉ Technical
- ◉ Managerial   ◉ Other (please specify)
- ◉ Administrative

Other role

[   ]

API strategies

The overall goal of this section is to explore the existence of API strategies, intentions to develop API strategies, and perceptions about their adoption. The questions will address key drivers, enablers and benefits, as well as barriers and risks.

*Which of the following statements mostly closely aligns with the status of your API strategy?

- ◉ We do not have an API strategy and do not intend to develop one but we are using APIs in our activities
- ◉ We are intending to develop an API strategy in the next 1-2 years
- ◉ We are in the process of developing an API strategy
- ◉ We have developed an API strategy and are in the early stages of implementation

○ We are well advanced in the implementation of our API strategy

○ We have upgraded or are upgrading our API strategy to accommodate lessons learned or fresh needs

*Does the API strategy apply to your whole organisation?

○ Yes   ○ No

To which sector(s) does your API strategy apply?

```

```

What are the goals (in two or three sentences) of your API strategy and how do you plan to achieve them?

800 character(s) maximum

```

```

Who are the stakeholders for your API strategy?

800 character(s) maximum

```

```

*Is your API strategy embedded in, or related to, other strategies (e.g. an Open Data strategy, an ICT strategy)?

Please specify if the API strategy is independent or embedded/directly related to other strategies (IT-related or domain related).

○ Yes   ○ No

What is the name of the other strategies?

```

```

Can you, please, share with us the documentation related to your API strategy or activities?

Please specify the link(s) to your API strategy (or API strategy related) documentation or (if you do not have the web link) send it to: jrc-apis4dgov@ec.europa.eu.

```

```

*In which year was the API strategy launched or in which year do you plan to launch it?

```

```

*When will your current API strategy expire?

If your strategy does not have an end date, please enter "Ongoing".

[ ]

* Who can access the APIs related to your strategy?

- [ ] Private (only within organisation)
- [ ] Organisations of other governments
- [ ] Partner service providers
- [ ] Case by case basis
- [ ] Open to all
- [ ] Other (please specify)

5

Other access

[ ]

Apart from the technical implementation, which other activities are envisaged to support your API strategy?

- [ ] Build a government API team
- [ ] Create and/or engage API communities
- [ ] Design and spread API guidelines
- [ ] Organise internal training on the API topic (e.g. importance of API, technical implementation etc)
- [ ] Search and propose API best practices
- [ ] Other (please specify)

Other activities

[ ]

* Apart from the technical implementation, which activities do you think could be useful to support an API strategy in your organisation?

at most 3 choice(s)

- [ ] Build a government API team
- [ ] Create and/or engage API communities
- [ ] Design and spread API guidelines
- [ ] Organise internal training on the API topic (e.g. importance of API, technical implementation etc)
- [ ] Search and propose API best practices
- [ ] Other (please specify)

Other activities

[ ]

* How is your API strategy financed?

Please specify if and which specific resources were allocated for your API strategy.

- ( ) Dedicated budget
- ( ) Funding from other sources (please specify)

Which other public sources?

[ ]

*What are these financial resources for API used for?

- ☐ Internal purposes (e.g. internal department IT systems, staff etc.)
- ☐ External purposes (e.g. contracting and/or private public partnership)
- ☐ Other purposes (please specify)

Other purposes

```

```

*How much budget (approx.) is allocated or planned to allocate to your API strategy each year?

Please specify the entity of the allocated budget in euro/year.

- ○ <50k
- ○ 50k-100k
- ○ 100k-500k
- ○ 500k-1M
- ○ > 1M

*What type of user-charging mechanism is used or intended?

- ☐ Fixed fee
- ☐ Usage based fees (tiered, unit based, transaction-based)
- ☐ Partially chargeable/freemium model
- ☐ Free of charge
- ☐ Other user-charging mechanism (please specify)

Other user-charging mechanism

```

```

*What type of user-charging mechanism do you think could be suitable for APIs?

- ☐ Fixed fee
- ☐ Usage based fees (tiered, unit based, transaction-based)
- ☐ Partially chargeable/freemium model
- ☐ Free of charge
- ☐ Other user-charging mechanism (please specify)

Other user-charging mechanism

```

```

*What type of financial model is used or intended to be used?

- ☐ Profit based
- ☐ Full cost-recovery
- ☐ Partial contribution to costs
- ☐ No contribution to costs
- ☐ Other (please specify)

Other financial model

[ ]

*What are the main drivers for your API strategy?

Specify those that influence strategy, objectives or requirements.

- [ ] EU legal acts
- [ ] Your government policy/demand
- [ ] External stakeholder demand - ICT/API community

- [ ] National/local legal act (s)
- [ ] Organisational policy/demand
- [ ] Other (please specify)

- [ ] Keep pace with technologies
- [ ] External stakeholder demand - business community

Which legal act(s)?

[ ]

Other drivers

[ ]

*Which drivers do you think could influence the adoption of APIs in government?

at most 4 choice(s)

Please specify those most important for you that influence strategy, objectives or requirements.

- [ ] EU legal acts
- [ ] Your government policy/demand
- [ ] External stakeholder demand - ICT/API community

- [ ] National/local legal act (s)
- [ ] Organisational policy/demand
- [ ] Other (please specify)

- [ ] Keep pace with technologies
- [ ] External stakeholder demand - business community

Which legal act(s)?

[ ]

Other drivers

[ ]

*Which key enablers has your strategy identified or experienced?

Please specify those that will contribute to the success of the API strategy.

- [ ] Availability of API platforms
- [ ] Availability of political support

- [ ] Availability of new technology(ies)
- [ ] Availability on the market of private companies specialized on API management

- [ ] Availability of standards, specifications and guidelines
- [ ] Availability of support from your organisation

- [ ] Availability of external funds
- [ ] Availability of API specific training

☐ Availability of internal funds   ☐ Existence of an international API community

☐ Availability of external skilled developers   ☐ Existence of a national or regional API community

☐ Availability of internal skilled developers   ☐ Other (please specify)

Other key enablers

[   ]

*Which key enablers do you think could support the adoption of APIs in government?

at most 4 choice(s)

Please specify the most important for you.

☐ Availability of API platforms   ☐ Availability of political support

☐ Availability of new technology(ies)   ☐ Availability on the market of private companies
                                                       specialized on API management

☐ Availability of standards, specifications   ☐ Availability of support from your organisation
   and guidelines

☐ Availability of external funds   ☐ Availability of API specific training

☐ Availability of internal funds   ☐ Existence of an international API community

☐ Availability of external skilled developers   ☐ Existence of a national or regional API community

☐ Availability of internal skilled developers   ☐ Other (please specify)

Other key enablers

[   ]

*Which barriers have been identified or experienced in your API strategy?

Please, select those that are applicable and provide a sentence about the challenges your strategy may face.

☐ Legal (please specify, e.g. need of a clear legal framework, privacy issues to consider etc)

☐ Political (please specify, e.g. API initiative/strategy not envisioned, lack of institutional support etc)

☐ Social (please specify, e.g. API ecosystem not clear, difficult to manage interactions among API
   stakeholders, unknown use and related impact of API etc)

☐ Economic (please specify, e.g. difficult economic sustainability, lack of demand etc)

☐ Organisational (please specify, e.g. Difficult inter-agency re-organisation, lack of API ICT skills
   /expertise etc)

☐ Operational or technical (please specify, e.g. difficult to maintain the API documentation, difficult to
   re-engineering the legacy ICT architecture, no clear (or no) guidelines, need working on data
   management etc)

☐ Other barriers (please specify)

Please expand on the above choices

[   ]

*Which barriers do you think could challenge the adoption of APIs in government?

Please, select those that are applicable and provide a sentence about the challenges an API initiative may face.

☐ Legal (please specify, e.g. need of a clear legal framework, privacy issues to consider etc)

☐ Political (please specify, e.g. API initiative/strategy not envisioned, lack of institutional support etc)

- ☐ Social (please specify, e.g. API ecosystem not clear, difficult to manage interactions among API stakeholders, unknown use and related impact of API etc)
- ☐ Economic (please specify, e.g. difficult economic sustainability, lack of demand etc)
- ☐ Organisational (please specify, e.g. Difficult inter-agency re-organisation, lack of API ICT skills /expertise etc)
- ☐ Operational or technical (please specify, e.g. difficult to maintain the API documentation, difficult to re-engineering the legacy ICT architecture, no clear (or no) guidelines, need working on data management etc)
- ☐ Other barriers (please specify)

Please expand on the above choices

What types of benefits has your API strategy identified or experienced?
- ☐ Social
- ☐ Economic
- ☐ Organisational
- ☐ Technical
- ☐ Other types of benefits (please specify)

Other types of benefits

What types of benefits do you think the adoption of an API strategy could bring?
- ☐ Social
- ☐ Economic
- ☐ Organisational
- ☐ Technical
- ☐ Other types of benefits (please specify)

Other types of benefits

*Which social benefits?

Please specify if the API strategy envisages social impact targets and which ones.

- ☐ Empower the users
- ☐ Improve accountability of government
- ☐ Improve civic engagement
- ☐ Increase the number of apps and public services
- ☐ Increase the number Government to Business (G2B) connections

- ☐ Increase government transparency
- ☐ Increase government trust
- ☐ Promote government accessibility to (open) data
- ☐ Reduce digital divide
- ☐ Other (please specify)

Other social benefits

[   ]

*Which social benefits?

at most 4 choice(s)

Please specify the most important ones for you.

☐ Empower the users   ☐ Increase government transparency

☐ Improve accountability of government   ☐ Increase government trust

☐ Improve civic engagement   ☐ Promote government accessibility to
                                                    (open) data

☐ Increase the number of apps and public services ☐ Reduce digital divide

☐ Increase the number Government to Business (G2B) ☐ Other (please specify)
   connections

Other social benefits

[   ]

*Which economic benefits has your API strategy envisaged or experienced?

☐ Attract private investments   ☐ Improve private sector   ☐ Spark local economic
                                     competition   development

☐ Create new jobs   ☐ Give new entrepreneurial   ☐ Other (please specify)
                                     possibilities

☐ Encourage innovation in the   ☐ Reduce costs of ICT in
   public sector   government

Can you estimate (in Euro) the savings from using APIs?

[   ]

Other economic benefits

[   ]

*Which economic benefits do you think a government API strategy should target?

at most 4 choice(s)

Please specify the most important ones for you.

☐ Attract private investments   ☐ Improve private sector   ☐ Spark local economic
                                     competition   development

☐ Create new jobs   ☐ Give new entrepreneurial   ☐ Other (please specify)
                                     possibilities

☐ Encourage innovation in the   ☐ Reduce costs of ICT in
   public sector   government

Other economic benefits

```
┌─────────────────────────────────────────────────────────┐
│                                                         │
│                                                         │
└─────────────────────────────────────────────────────────┘
```

* What organisational benefits are envisaged or experienced by your API strategy?

- ☐ Better integration of processes or services across government
- ☐ Better monitoring of information exchange
- ☐ Contribution to the Digital Transformation of your organisation
- ☐ Encourage a whole-of-government API approach
- ☐ Improve decision making
- ☐ Improve efficiency
- ☐ Improve internal collaboration
- ☐ Improve the use of (open) government data
- ☐ Improve public digital services delivery
- ☐ Other (please specify)

Other organisational benefits

```
┌─────────────────────────────────────────────────────────┐
│                                                         │
│                                                         │
└─────────────────────────────────────────────────────────┘
```

* Which organisational benefits do you think an API strategy should target?

at most 4 choice(s)

Please specify the most important ones for you.

- ☐ Better integration of processes or services across government
- ☐ Better monitoring of information exchange
- ☐ Encourage a whole-of-government API approach
- ☐ Improve decision making
- ☐ Improve efficiency
- ☐ Improve internal collaboration
- ☐ Improve the use of (open) government data
- ☐ Improve public service delivery
- ☐ Contribution to the Digital Transformation of your organisation
- ☐ Other (please specify)

Other organisational benefits

```
┌─────────────────────────────────────────────────────────┐
│                                                         │
│                                                         │
└─────────────────────────────────────────────────────────┘
```

* Which technical benefits are envisaged or experienced by your API strategy?

- ☐ Improve common vocabularies /semantics
- ☐ Improve data quality and data models
- ☐ Improve ICT scalability
- ☐ Improve IT systems interoperability
- ☐ Improve performance, usability or documentation of APIs
- ☐ Optimise ICT architecture
- ☐ Other (please specify)

Other technical benefits

```
┌─────────────────────────────────────────────────────────┐
│                                                         │
│                                                         │
└─────────────────────────────────────────────────────────┘
```

* Which technical benefits do you think an API strategy should target?

at most 4 choice(s)

Please specify the most important ones for you.

- ☐ Improve common vocabularies /semantics
- ☐ Improve data quality and data models
- ☐ Improve ICT scalability
- ☐ Improve IT systems interoperability
- ☐ Improve performance, usability or documentation of APIs
- ☐ Optimise ICT architecture
- ☐ Other (please specify)

Other technical benefits

[text box]

*What are the main cost areas envisaged of experienced by your API strategy?

- ☐ Building an APIs inventory
- ☐ Building/updating a data inventory
- ☐ Building an existing systems inventory
- ☐ Changing legacy/current systems
- ☐ External/procurement /consultancy costs
- ☐ Rationalising ICT architecture
- ☐ Staff training
- ☐ Standardising vocabularies /semantics
- ☐ Other costs (please specify)

Other cost areas

[text box]

*What are the main cost areas do you think the adoption of an API strategy could bring?

- ☐ Building an APIs inventory
- ☐ Building/updating a data inventory
- ☐ Building an existing systems inventory
- ☐ Changing legacy/current systems
- ☐ External/procurement /consultancy costs
- ☐ Rationalising ICT architecture
- ☐ Staff training
- ☐ Standardising vocabularies /semantics
- ☐ Other cost areas (please specify)

Other cost areas

[text box]

*Which risks has your API strategy identified or experienced?

- ☐ Competing initiatives (e.g. adopting of different types of APIs such as SOAP, REST etc)
- ☐ Cyber-security risks
- ☐ Data privacy risks
- ☐ Difficult to maintain updated the API documentation
- ☐ Lack of political support
- ☐ Loss of visibility of the ICT investment of the organisation (on the web)
- ☐ Low return on investment
- ☐ Low usage
- ☐ Not sustainable in the future
- ☐ Organisational change
- ☐ Scalability
- ☐ Other risks (please specify)

Other risks

> [text box]

What steps have you taken to mitigate or minimise these risks?

> [text box]

* Which risks do you think could challenge the adoption of API in government?

at most 4 choice(s)

Please specify the most important for you.

- ☐ Competing initiatives (e.g. adopting of different types of APIs such as SOAP, REST etc)
- ☐ Cyber-security risks
- ☐ Data privacy risks
- ☐ Difficult to maintain updated the API documentation
- ☐ Lack of political support
- ☐ Loss of visibility of the ICT investment of the organisation (on the web)

- ☐ Low return on investment
- ☐ Low usage
- ☐ Not sustainable in the future
- ☐ Organisational change
- ☐ Scalability
- ☐ Other risks (please specify)

Other risks

> [text box]

* Does your strategy envisage or adopt cyber-security measures?

○ Yes (please specify)   ○ No

What cyber-security measures?

300 character(s) maximum

Please specify how the API strategy envisages any cyber-security issues related to API. If so, explain how is addressed (e.g. guidelines, funding, recommendations, ...)

> [text box]

* Do you think the adoption of APIs requires additional/specific cyber-security measures?

○ Yes (please specify)   ○ No

What cyber-security measures?

300 character(s) maximum

Please specify how an API initiative should consider any cyber-security issues related to API.

> [text box]

Apart from the API strategy (if any), what other activities related to APIs is your organisation involved in?

800 character(s) maximum

```
┌─────────────────────────────────────────────────────────────┐
│                                                             │
│                                                             │
│                                                             │
│                                                             │
│                                                             │
└─────────────────────────────────────────────────────────────┘
```

*Have you conducted any impact assessment study relating to the general API strategy or API implementation in your organisation?

Please specify the existence of the impact assessment analysis and evaluation.

○ Yes   ○ No

Can you provide us the impact assessment documentation?

Please specify the web link to the impact assessment study or (if you do not have the web link) send it to: jrc-apis4dgov@ec.europa.eu.

```
┌─────────────────────────────────────────────────────────────┐
│                                                             │
│                                                             │
└─────────────────────────────────────────────────────────────┘
```

API Implementation

The purpose of this section is to investigate concrete API implementations projects, either as part of an API strategy or standalone from any strategy. You will be invited to describe up to three projects or activities that best illustrate your experiences. These can be, for example, the development of an API catalogue, the use of APIs in a specific sector such as transportation, or a multi-sector use of APIs, e.g. to access address data.

*Does your organisation currently implement projects related to APIs?

○ Yes (please specify)   ○ No

*Are the APIs publicly available?

○ Yes   ○ No

Can you provide us the main web page related to the API of your organisation?

Please include http:// or https:// in the web link.

```
┌─────────────────────────────────────────────────────────────┐
│                                                             │
│                                                             │
└─────────────────────────────────────────────────────────────┘
```

Could you, please, list from one to three API cases your organization has published?

	API project 1	API project 2	API project 3
Title			
Short Description			
Home page			
Main costs			
Main benefits			
Motivation of your choice			

Which sector(s) do(es) the API implementation project(s) cover?

- ☐ Agriculture
- ☐ Culture
- ☐ Demography
- ☐ Economic and financial affairs
- ☐ Education and training
- ☐ Elderly people
- ☐ Employment

- ☐ Energy
- ☐ Environment
- ☐ Family
- ☐ Fisheries
- ☐ Food
- ☐ General affairs
- ☐ Health, medical care

- ☐ Home affairs
- ☐ Industry
- ☐ Jobs
- ☐ Justice
- ☐ Labor market
- ☐ Pension
- ☐ Registry office

- ☐ Social policies
- ☐ Sport
- ☐ Taxes
- ☐ Telecommunications
- ☐ Transport
- ☐ Young people
- ☐ Other (please specify)

Other sector(s)

>

Does your organisation adopt a standard access governance (e.g. access via e-identification, digital id etc.)?

- ○ Yes (please specify)   ○ No

Which kind of access does your organisation provide?

>

*Are APIs of your organisation monitored?

- ○ Yes (please specify)   ○ No

Which metrics are monitored?

- ☐ API traffic
- ☐ Community engagement (e.g. forum activity, social media on apps)
- ☐ Customer satisfaction survey
- ☐ Helpdesk calls
- ☐ Mobile vs Web API usage
- ☐ Number of apps using the APIs (either web or mobile)

- ☐ Number of developers using the APIs
- ☐ Number of supported digital services
- ☐ Quality of service monitoring
- ☐ Revenue
- ☐ Other (please specify)

Other metrics

>

Which metrics do you think should be measured to monitor an API?

at most 4 choice(s)

- ☐ API traffic
- ☐ Community engagement (e.g. forum activity, social media on apps)

- ☐ Number of developers using the APIs
- ☐ Number of supported digital services

- ☐ Customer satisfaction survey
- ☐ Helpdesk calls
- ☐ Mobile vs Web API usage
- ☐ Number of apps using the APIs (either web or mobile)

- ☐ Quality of service monitoring
- ☐ Revenue
- ☐ Other (please specify)

Other metrics

[ ]

*Does your organisation plan to develop further APIs in the next 2/3 years?

○ Yes (please specify) ○ No

Which APIs does your organisation plan to develop?

[ ]

*Are you aware and can you share with us examples of API best practices or guidelines (either inside or outside your organisation)?

○ Yes (please specify) ○ No

Can you please share with us this documentation?

Please provide us the web link or (if it does not exist), send it to: jrc-apis4dgov@ec.europa.eu.

[ ]

European Commission support

In this section, we will ask you about the main activities the EC could perform to support the government API adoption. We also investigate about the contribution you could give to pan-European API strategies.

*In which ways could the European Commission support API strategy adoption at the EU, country or local level?

at most 5 choice(s)

We would appreciate if you can indicate the main activities the EC could perform to support the government API adoption. Please select the most important.

- ☐ Create new EU legislation
- ☐ Create an EU API community

- ☐ Identify and disseminate API best practices
- ☐ Implement API platforms at the EU level
- ☐ Implement an EU API catalogue
- ☐ Organise API events (e.g. conferences, workshops and hackathons)

- ☐ Organise and promoting API training
- ☐ Promote and fund innovation and research EU projects
- ☐ Promote networking
- ☐ Propose common API guidelines
- ☐ Other (please specify)

Other support

[ ]

Are there any particular policy areas or applications where pan-European APIs will prove beneficial and, if so, why?

[ ]

In what way could you contribute to pan-European actions on APIs?

☐ Best practices   ☐ Projects   ☐ Tools   ☐ Other contribution (please specify)

☐ Guidelines   ☐ Standards   ☐ Training

Other contribution

[ ]

Additional comments and feedback

Are interested in receiving a free entrance for the APIdays event in Helsinki?

◯ Yes, please let me know if I am among the first twenty contributors

◯ No, thanks, unfortunately I cannot participate

Thanks a lot for your valuable contribution and for the time you have dedicated to this survey. Please, give us your feedback on the specific topic of the survey and on any additional comment, if any.

Are there any additional aspects related to APIs that are not covered by this survey?

[ ]

Provide us with any additional comments.

[ ]