

Best Practices, 2023

Large Digital Advancement Projects, Organizational Models and Best Practices

by Agusti Miro and Natalia Musach



A question that corporate, industry, regional and national leaders, and policymakers often raise in conferences, workshops and seminars with CETMO, is how to best structure and implement large digital advancement efforts.

Regarding multi-party Digitalization efforts, with some participation of public administrations, it is well known that public agencies, academic institutions, and industry, research and development institutions can act as digital insight accumulators as well as centres of excellence to accelerate the Digitalization of their areas of influence.

There is a broad variety of corporate Digital Transformation and digital advancement projects. The large corporate Digital Upskilling and Reskilling projects demonstrate a consistent organizational model, from which some Best Practices can also be drawn.

This article presents five Best Practices for the organizational model and operating protocols for successful large Digitalization efforts. The article draws upon two sources, from national programs developed by specialized national public agencies from the most digitally advanced countries, which are later applied to regional, local, and industry-level activities. As well as, from large corporate projects.

In addition, the article asserts that these five Best Practices apply to any large effort, whether it is from corporations, trade associations, or a specific sub-industry or region.

Organizational Model of Public-Led Digital Advancement Programs

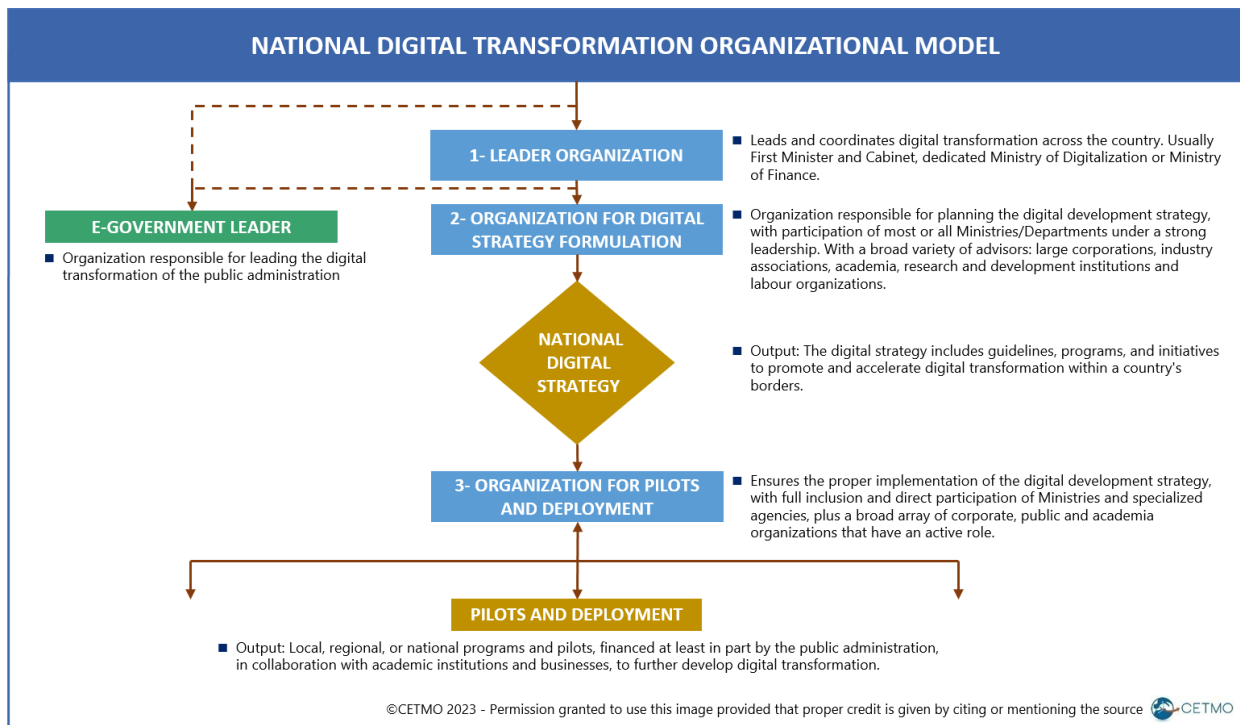
Countries As indicated in other articles, there are in place comprehensive international digital competitiveness analyses, that indicate that there is a group of digitally advanced countries that consistently rank in the top eight positions: 1. USA, 2. The Netherlands, 3. Singapore, 4. Denmark, 5. Switzerland, 6. Republic of Korea, 7. Sweden and 8. Finland (IMD 2021,2022, 2023, Tufts University 2020, EU 2022, 2023).

Of these eight countries, seven; the Netherlands, Singapore, Denmark, Switzerland, the Republic of Korea, Sweden and Finland, plus some other fast-followers like Estonia, share a common approach to organizing their industry and national digital advancement efforts, based on an important role of their public administration.

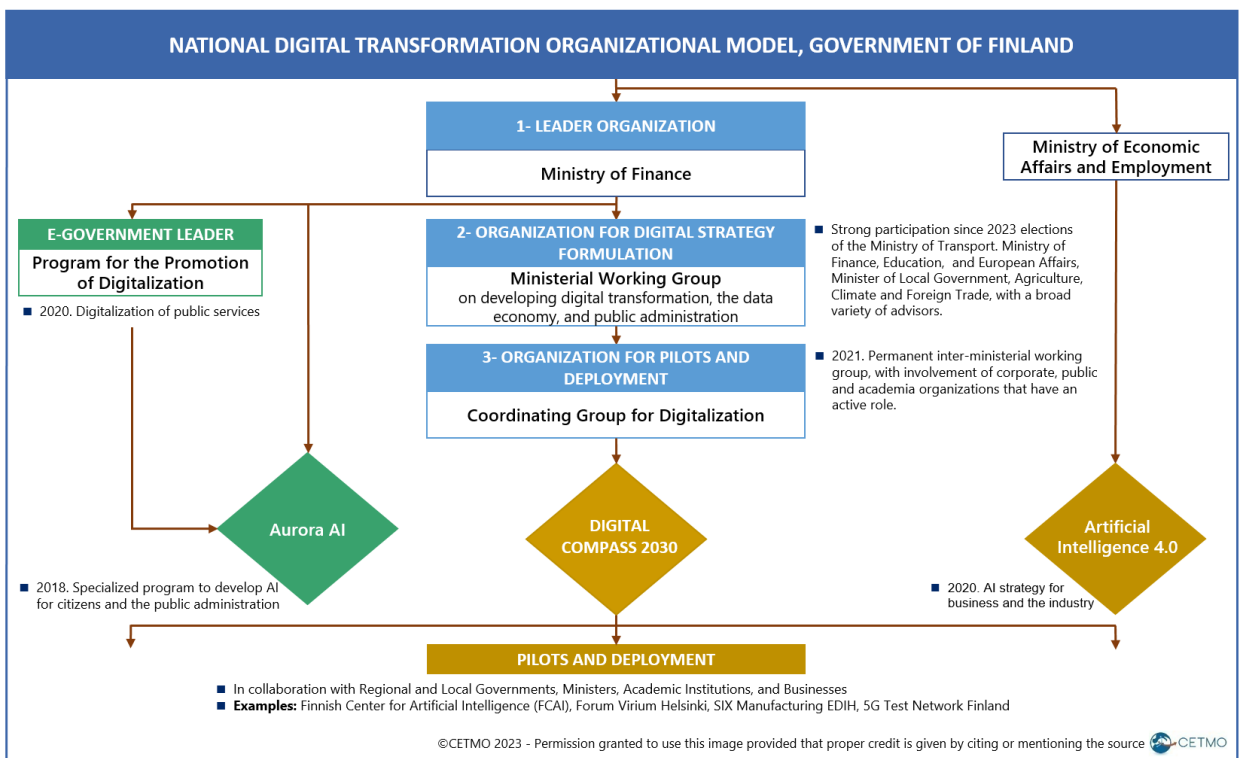
On the other side, the USA operates with limited involvement of the public administration, and without true national and sector-wide digital strategies. The USA manages to be among the most digitally advanced countries due to the strength of elite technical academia, and the dynamic role of world-class technology providers, plus the resources of multinationals headquartered there. Corporations in the United States have developed a consistent organizational model to increase their digital skills, which has been refined and replicated globally.

The five best practices for large-scale digital advancement efforts developed by The Netherlands, Singapore, Denmark, Switzerland, Republic of Korea, Sweden and Finland are:

1. Required formulation of encompassing, actionable, and implementable digital development strategies.
2. Establishment of an organizational model with standardized processes to generate three sequential outputs: Digital development strategy formulation, pilot setting, testing and refining, and thirdly deployment of large programs.
3. Creation of three distinct organizations, one in charge of the overall leadership, a second specialized in the formulation of the digital strategy, and a third that implements the digital strategy through pilot setting, iteration and refinement and later designs and oversees large program deployments.
4. Authority setting and establishment of enforceable and mandatory, collaboration and output acceptance protocols.
5. Secure broad participation and set multi-party efforts to facilitate the recognition of the leading organization authority, the allocation of resources, and the quality and acceptance of the outputs.



The diagrams below illustrate the national organization model of Finland, based organization model based on three organizations. Additionally, as is common in all other digitally advanced countries, Finland has separated strategies and organizations for e-government and artificial intelligence development which has a higher participation of academia and research centres.



1. Formulate an Actionable Digital Development Strategy

The Netherlands, Singapore, Denmark, Republic of Korea, Switzerland, Sweden and Finland digital efforts, all have the central element of a digital development strategy, to achieve changes at the national and industry level.

In 2017-2018 these countries began developing digital development strategies, with Estonia following shortly after. These strategies remain consistent and independent of the political colour of their governments.

Examples include the Netherlands which developed the *Dutch Digitalization Strategy 1.0* in 2017 with the last iteration in 2022 with the *Digital Economy Strategy* and Denmark in 2017 established the *Disruption Council* to handle initially the impact of technological change on the labour market, that in turn, led to the present *National Strategy for Digitalization 2022*. Other examples are the *Sweden Digital Transformation Strategy* and Finland's *Digital Compass* latest 2022 version.

These development strategies are not merely theoretical exercises, as they have been implemented by specific separate government agencies across all industries. This strong public administration action is because Digital Transformation is considered to exceed the capabilities and resources of most single corporations and organizations. For this reason, digital development strategies and their implementation are understood as a necessary national effort, and as an ongoing top priority for the advancement of the economy and its competitiveness.

2. Set a Well-Defined Organizational Model with Standardized Processes

The eight digitally advanced countries before mentioned, share the same organizational model with three separate organizations that follow a well-defined set of processes to generate specific outputs: the formulation of the digital development strategy and the design and refinement of pilots to later deploy digital improvement programs at large scale.

3. Define and Create Three Specialized Organizations with Separate Functions

As explained above, the digital advancement efforts of leading countries follow a similar organizational model of three separate organizations with a dedicated function:

1. High-level leading organization.
2. Digital strategy formulation organization.
3. Development and deployment organization, whose output is the setting and refining of pilots to later deploy the programs at a large scale in collaboration with local and regional agencies and industry associations.

3.1. Leading Organization at the Highest Possible Level

A best practice is to have a single organization with the highest authority and executive power possible, that coordinates with all parties involved and that centralizes all digital improvement efforts.

All digitally advanced countries analysed, except for the USA, have clear leadership, with a dedicated government agency that centralizes all digital efforts and establishes mandatory and efficient interdepartmental collaboration and coordination protocols with economic agents. CETMO's research has identified that all these leading agencies operate at the highest executive power level, with two different formats:

- a. Specific Ministry of Digitalization, i.e. The Netherlands and Sweden.
- b. Separated agency reporting directly to a specific Minister, such as the Minister of Finance/Economy in Denmark, Finland and Estonia and the Minister of Science in the Republic of Korea.

3.2. Technical Specialized Organization to Formulate the Digital Development Strategy

The leading organization oversees the efforts of another specialized and highly technical agency that formulates national and sector-specific digital improvement strategies.

In all countries analysed, the strategy formulation organization works in close cooperation with other public agencies and ministries and also involves large corporations, industry associations, academia, research and development institutions and labour organizations as advisors.

3.3. Multi-Party Organization for Pilot Setting and Program Implementation

A third, broader, organization is set to develop detailed and specific action-oriented implementation paths. Its first output is a battery of pilots, to test, confirm or reject hypotheses, repeat and refine at local, regional, and sectoral levels. Later it defines large programs and coordinates their deployment.

This organization includes representatives of ministries and other specialized agencies, plus a broad array of corporate, public and academic organizations that have an active role, with well-established and mandatory collaboration protocols.

The speed and efficiency of setting pilots and the decisiveness to later establish policies and deploy implementation programs, differentiate the successful digital advancement of the Netherlands, Singapore, Denmark, Switzerland, the Republic of Korea, Sweden and Finland, from the lacklustre results of Germany. Despite four waves of pilots under the Jobstarter-Plus and other programs, Germany has to date, failed to translate pilot experience into programs and policies, resulting in a steady decline in its national digital competitiveness (17th in 2019 rankings and 23rd in 2023) (IMD 2021,2022,2023).

4. Secure Broad Participation and Set Multi-Party Effort

Successful large digital advancement initiatives involve as many affected parties as possible, such as large corporations, corporate and industry associations, labour unions, public operators, public administration, specialized agencies, academia, and research and development centres.

The participation of all parties facilitates the recognition of the leading organization authority, the allocation of resources and the quality and acceptance of the outputs. Any party not involved may become a point of resistance to the deployment of digital efforts.

As indicated before, a broad range of parties participate as advisors when formulating the digital advancement strategy and are part of the organization leading the pilot setting and full implementation.

Direct research and the analyses reviewed show that multi-party efforts are common in all kinds of successful digitalisation initiatives. The full leverage of digital technologies with the structural changes that often convey, usually exceed the scope and capabilities of a single party.

5. Generate Authority and Establish Mandatory Collaboration Protocols

There are two key elements for successful large digital development efforts, one is the direct participation of as many governmental agencies and parties as possible, following detailed and enforceable mandatory protocols. The other key element is all parties' acceptance of the authority, directions and mandates of the organizations driving the digital advancement effort.

In the cases explained, authority and enforceability are provided by the participation of national administration agencies at the highest executive power, and the foundational agreements negotiated with the parties involved.

In cases of digital efforts at a sub-industry or territorial level, authority and enforceability can be provided through:

1. Role of public agencies at the highest possible level.
2. Regulatory or at least normative power is provided to the leading organization.
3. The leading organization is widely considered a digital centre of excellence, credible and technically competent.
4. Detailed, agreed, enforceable contractual obligations are set to organize mandatory collaboration protocols and to accept the outputs generated. These contractual obligations are more extensive and better defined than the ones commonly included in standard collaboration agreements.
5. Engagement should be increased by participation incentives provided by public agencies, and the resulting benefits of the Digitalization effort should be clear for all parties.

Organizational Model of Large Corporate Digital Advancement Projects

The following summarizes the organizational model the key learnings and the organizational model of corporate-wide Reskilling and Upskilling programs, across a variety of sectors including financial, digital, and professional services, agribusiness, consumer goods, retail, manufacturing and telecommunications.

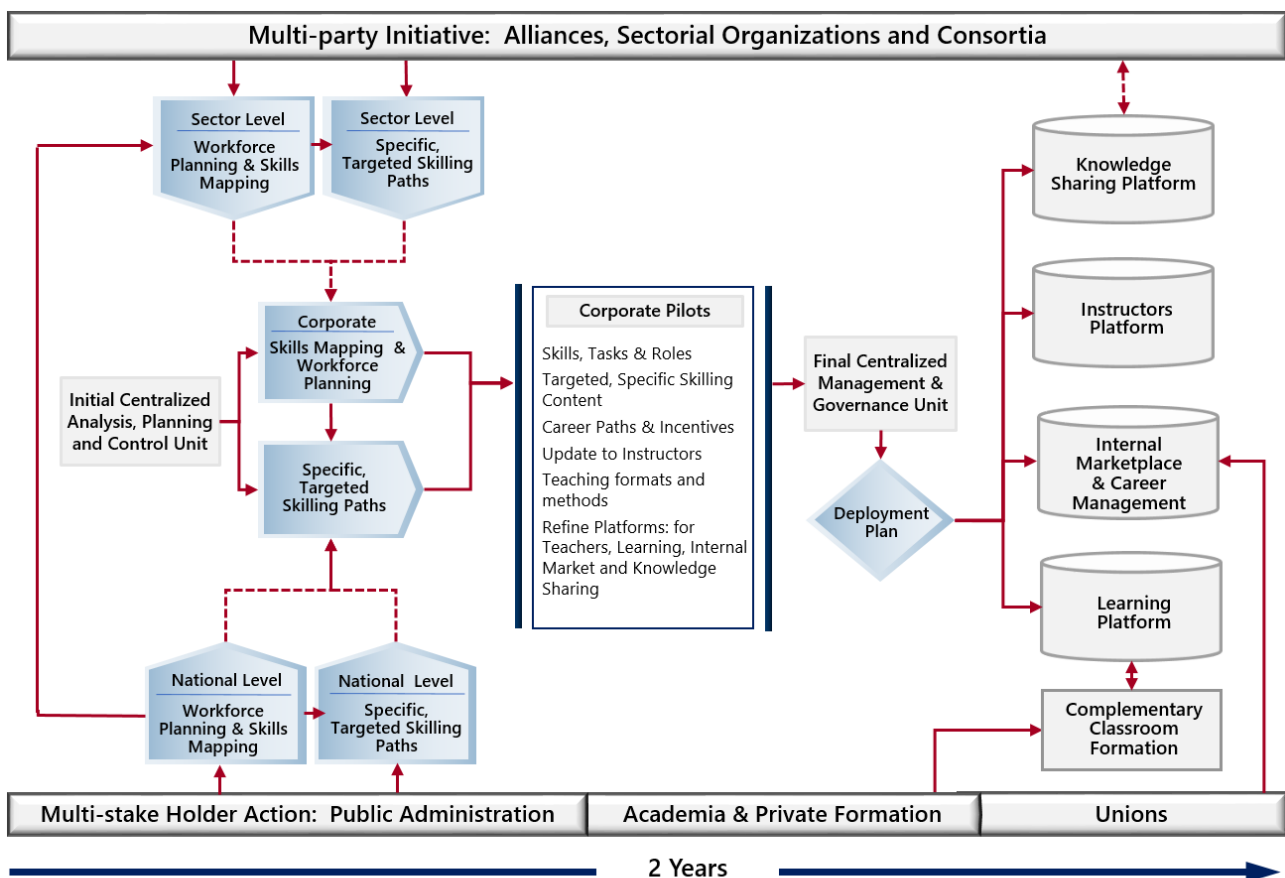
The successful corporate-wide programs analysed include AT&T, Amazon, Best Buy, Cargill, Google, Procter&Gamble (USA), Lloyds Banking Group and PwC (UK), Unilever (the Netherlands), L'Oréal (France), Invesco (Canada), and Bosch (Germany).

These large corporate Digital Skilling programs have a consistent organizational model, from which Best Practices can be drawn for large digital advancement initiatives.

These corporate programs share the same five organizational guiding principles as the aforementioned national ones.

1. The program results from a well-established digital development strategy.
2. They have a clearly defined organizational model with standardized processes.
3. There are three separate organizations, the first one with centralized leadership at the top of the corporate level, with clear authority. A second specialized organization, is in charge of the formulation of the digital advancement strategy, with the participation of different departments, input from technology providers and some labour participation to facilitate support and participation.

- Large Corporate Digital Skilling Programs, Organizational Model Summary -



©CETMO 2023 - Permission granted to use this image provided that proper credit is given by citing or mentioning the source CETMO

There is a dedicated third organization that plans, develops, deploys and refines pilots with a broader participation of departments, providers, consultants and employees.

In national efforts led by the public administration, this same third organization managed the full deployment and implementation of programs. Regarding corporate programs, the final implementation is managed by a fourth centralized entity with accepted authority and broad support of all parties involved.

4. Digital corporate programs, similar to national ones, secure broad multi-stakeholder participation, considering different departments and personnel input. Additionally, it is a well-established Best Practice how these programs stimulate employees' involvement by offering transparency and building a dedicated enterprise platform for career management and internal job opportunities.
5. The scale, resources and cumulative learning required for large transformational efforts are available just to large corporations, for the rest a multi-stakeholder collaborative effort is required through alliances of corporations, and ad-hoc consortia that may also include the support of the public administrations and sectorial organizations.

Multi-party efforts require a neutral party that manages sensitive areas like each company's internal confidential information. This is important in industries and countries where there is little collaborative business culture and experience. This neutral party can be a key technology supplier, a sectorial organization,

a research and development institute or a public agency.

Conclusions

The setting of processes and organizations to formulate corporate, sector and national Digital Transformation strategies, pilot setting and later deployment and implementation of programs follows a set of well-established Best Practices from leading corporations and public administrations of the most digitally advanced countries.

Enterprises in countries without a national digital development organization are still able to organize large digital advancement efforts, with the added difficulty that they may require a multi-party collaborative approach.

The multi-party effort can follow two models depending on the degree of participation of public agencies. A model similar to the national one but at a smaller scale leveraging existing leading academic, corporate, technical and public digital centres of excellence, to become the leading organization that sets collaboration protocols and coordinates the rest of participating organizations and enterprises.

Enterprises and sector organizations can build alliances and ad-hoc consortia without significant public participation, following the corporate digital effort organisational model described, which requires a credible and broadly accepted neutral party as the coordinating organization.

CETMO Foundation

Agusti Miro and Natalia Musach
Av. de Josep Tarradellas 40 entlo. - 08029 Barcelona

cetmo@cetmo.org - <https://www.cetmo.org/>

Registered with the number 129 in the "Protectorado único de Fundaciones".

Copyright © 2023 CETMO. All rights reserved.