THE GUIDE FOR CREATION OF THE NATIONAL DIGITAL SKILLS AND JOBS COALITIONS

CONTENT

1. ESSENCE, ROLE AND NECESSITY OF CREATING NATIONAL DIGITAL SKILLS AND JOBS COALITIONS

In the world of work, digital skills not only qualify us for jobs in conventional sectors, but also open doors to participate in emerging sectors and even to start our own businesses. People with more advanced digital skills can take advantage of an even wider range of opportunities brought about by ongoing advances in digital technologies, platforms, and devices. Digital skills are particularly important when considering the changing nature of the work environment, including the sharp growth in the use of freelancers and people participating in the gig economy, as well as broader structural changes that will profoundly impact the jobs of the future (*World Economic Forum, The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution, January 2016. http:// reports. weforum. org/ future- of- jobs- 2016/*).

The kinds of digital skills required to succeed are dramatically different today from those required even just five years ago. We used to be able to identify a discrete set of digital skills and have confidence that training programmes would equip citizens with those skills. These typically covered topics like basic hardware and software operations, email, and search. Today, we need continually to review and update those digital skills being taught as a result of new technologies and innovations – artificial intelligence, big data, blockchain, cloud computing, Internet of Things (IoT), machine learning, and mobile applications. This fast-changing backdrop makes it important for countries with existing digital skills training programmes to update their strategies and for those countries who have yet to launch a national digital skills programme to take action.

There are different approaches to stakeholder engagement, including industry and expert councils, coalitions, task forces and more informal methods such as organizing national or regional forums on digital skills.

This toolkit is devoted to creating the coalitions on a national level as one of the most effective and sustainable models for stakeholder engagement in Europe. Coalitions can be formed at any level, local to international, as coordination at any of these levels can support progress at any of the other levels. Some countries may want to start by joining a regional or international coalition since this approach offers the opportunity to become part of an already existing effort.

There are many reasons to establish national coalitions, and all these reasons relate to addressing the growing digital skills gap in states. As the digital economy and the single market are growing and are becoming more integrated, there are plenty of opportunities for individuals and businesses alike. However, not everyone has the right skills to take advantage of all the possibilities, possibilities which range from benefiting from the increased efficiency offered through e-government services to working in today's increasingly digital labour market. Without a serious effort made through the cooperation of various stakeholders many citizens risk missing out on the possibilities offered by today's digital society. Thus, enabling people to acquire and develop relevant digital skills is crucial.

National Digital Skills and Jobs Coalition (hereinafter NDSJC / National Coalition / Coalition) is a multi-stakeholder partnership which aims to increase the supply of ICT practitioners, improve digital literacy of citizens, workers and learners, and close the digital skills gap in their respective country.

National Coalitions should facilitate connecting public authorities, business, education, training and labour market stakeholders to take concrete measures that bridge the digital skills gap and raise competences for all. This can be done by supporting teachers and educators and promoting active involvement of business and other organisations. National Coalitions should support theirs states in developing comprehensive national digital skills strategies.

In order to achieve these goals NDSJCs should support the implementation of the following main objectives on the national level (grouped around five areas), which correspond to the goals of the EU Digital Skills and Jobs Coalition (*https://ec.europa.eu/digital-single-market/en/become-member-digital-skills-and-jobs-coalition*):

1. Training and matching for digital jobs:
    * Promoting student placement programmes with ICT and ICT-using businesses

* Work with existing ICT training providers to broaden and scale their offering to students

2. Mobility

   * Match people to ICT and digital jobs across borders

   * Offer mobility assistance services to ensure successful recruitment and a smoother transition

3. Certification

   * Stimulate take-up of a certification scheme for digital skills of ICT professionals, based on existing e-Competence Frameworks

   * Promote ICT professionalism and further develop e-Competence Frameworks

4. Awareness raising

   * Organise awareness raising campaigns to attract young people to ICT education, jobs and careers

   * Involve young people in "real" ICT projects to help them discover fascinating domains and ultimately choose a career in ICT

   * Organise promotional events that target kids, students, teachers, and adults to promote the importance and relevance of digital skills and ICT professional skills

5. Innovative learning and teaching

   * Boost the supply of ICT practitioners and a digitally skilled labour force through structural changes inside educational systems

   * Promote dialogue between industry and education providers to develop new curricula that are better aligned with labour market needs

NDSJCs can prioritize objectives they wish to focus on among mentioned, depending on the identified needs. Some might need to tackle all of them; others may concentrate on just a few.

2. KEY PRINCIPLES FOR THE ACTIVITIES AND FUNCTIONS OF THE NATIONAL DIGITAL SKILLS AND JOBS COALITIONS

National Coalitions (according to the Toolkit for National Coalitions published by European Commission under EU Digital Skills and Jobs Coalition *http://www.nationalcoalition.gov.gr/wp-content/uploads/2018/02/TOOLKIT-FOR-NATIONAL-COALITIONS.pdf*) should be founded based on the following principles:

• Be open to all new relevant stakeholders. It is important to allow the coalition to grow, and be ready to incorporate new stakeholders and even new sectors.

• Be willing to share best practices and to exchange knowledge with other national coalitions.

• Promote participation inside the Coalition through meetings and events and share activities of the coalition publicly. There should be some being a point of contact that the public can access for activities related to digital skills and jobs in their country through the Coalition.

• Prepare a communication and awareness raising strategy, to ensure that the members and the public of the Coalition increase efforts to stimulate the development of digital skills and careers.

• Promote modernisation of education curricula to better meet the labour market's needs. This can be supported by inviting the ministry of education to activities of the coalition.

• Promote the delivery of industry training programmes. This action can be supported through pledges.

• Work with the government to give support in developing a comprehensive national digital skills strategy.

• Monitor and evaluate the impact of the National Coalition.

In their respective countries, NDSJCs unite actions that aim to bridge both the digital skills gaps and digital jobs gaps. Any actions that can contribute to reducing the gap between people looking for jobs in the ICT market, all industrial sectors and develop basic and advanced digital skills for all citizens can and should be considered.

Coalitions are effective for organizing and sustaining stakeholders in digital skills efforts from strategy development through implementation, review, and updating. Ideally NDSJCs can perform the following functions:

• reviewing progress and needs of specific policies and programmes;

- monitoring new technological developments;
- capturing and forecasting workforce needs;
- assessing new digital skills learning opportunities;
- identifying new partners;
- joining new regional or global campaigns;
- developing new initiatives.

Coalitions are a popular way of uniting organizations' efforts across sectors and industries toward a common goal. These cooperative alliances are also advantageous when wide-scale and broad-based support is imperative for challenging the status-quo.

The functions NDSJCs can be grouped by the need for digital skills of four broad groups (*https://ec.europa.eu/digital-single-market/en/digital-skills-jobs-coalition*):

- Digital skills for all – developing digital skills to enable all citizens to be active in our digital society.
- Digital skills for the labour force – developing digital skills for the digital economy, e.g. upskilling and reskilling workers, jobseekers; actions on career advice and guidance.
- Digital skills for ICT professionals – developing high level digital skills for ICT professionals in all industry sectors.
- Digital skills in education – transforming teaching and learning of digital skills in a lifelong learning perspective, including the training of teachers.

3. STAGES OF LAUNCHING A NATIONAL DIGITAL SKILLS AND JOBS COALITION

To build a National Coalition, stakeholders should identify potential partners that are engaged in digital skills and digital jobs. National Coalitions often are formed first by establishing dialogue with some key partners who have the capacity to reach out on the matter of digital skills and jobs at a national level.

The roadmap to launch a national coalition for digital skills development should include the following basic steps:

1) Use the coalition to engage a range of stakeholders who can contribute to developing digital skills and competences in the country, including identifying current and future digital skills needs and goals, ideally across sectors. National Coalitions often are formed first by establishing dialogue with some key partners who have the capacity to reach out on the matter of digital skills and jobs at a national level.

2) Analyze the strengths and weaknesses of each stakeholder and identify the role they can play in developing digital skills and competences in the country.

In this process the potential contributions that each stakeholder can bring to the National Coalition have to be identified. Stakeholders should be brought together to discuss how they could get involved and the value that they could gain from being a member of a National Coalition. Ideally, they should demonstrate the following commitments:
- Participate in events, meetings, conferences on the topics of NDSJC to build the network;
- Identify specific actions that can be taken to address one or more of the objectives of the NDSJC;
- Represent the National Coalition in events, meetings and conferences;
- Allocate or match resources to support the Coalition actions;
- Disseminate and promote the National Coalition's actions at national, regional or local level;
- Fundraise to support the National Coalition's actions.

The key factor to engage new stakeholders in emerging National Coalition is to demonstrate the added value of their support and involvement that can be meet by addressing and supporting their specific interests. Naturally, stakeholders need to trust an initiative before endorsing it and credibility often can be offered by the profile of other stakeholders already involved. Often,

understanding the urgency of unfilled jobs, or digital skills shortages faced in the process of a digital transformation can be compelling enough to encourage stakeholders to join the coalition.

Stakeholders list

List each government agency, private sector group, civil society organization that should be involved in the digital skills coalition. For each entity describe the reason it should be involved and what role it would play. Also, capture any unique strengths of any of the stakeholders.

Name of the stakeholder	Role

Stakeholder coverage

Next, consider the extent to which the stakeholders represent the priority population groups and issues. Are there any gaps? If gaps exist, how will those interests be represented?

Name of the stakeholder	Representation of the priority population groups

3) Agree on governance, working methods or charters for the coalition.

The purpose of national coalitions launching is to help create a country's stakeholder group that will be responsible for developing and implementing a digital skills effort, whether it be a comprehensive national strategy or a specific digital skills initiative.

Lead entity

Identify the body that will lead and coordinate the digital skills coalition, and describe the rationale.

Governance and working methods

Lastly, it is prudent to establish governance mechanisms and working methods for the coalition. This can be a light mechanism such as the Digital Skills Charter (*https://ec.europa.eu/digital-single-market/sites/digital-agenda/files/digital_skills_and__jobs_coalition__members_charter_0.pdf*) used by the European Commission or based on similar rules governing other stakeholder coalitions used in-country or borrowed from other countries. Typically, the charter for stakeholder bodies would include elements such as mission or purpose; the legal authority for establishing the body; the name of the convenors; the scope of the body's work; its values; appointment and identification of members, chair and co-chairs and their terms; reference to any rules to be applied to its meetings such as quorums and confidentiality; the ability to create working groups and procedures related to public comment.

4) Develop an action and dissemination plan.

Once the National Coalition has been established, stakeholders should identify and agree on what are the objectives of the national coalition and what resources are to be allocated, for at least one year of activities. To do this, the partnership should create an action and dissemination plan that identifies the strategic objectives and sets the actions to be implemented during the National Coalition's first year of activities.

The action and dissemination plan will help the National Coalitions stakeholders to have a clear understanding on who is doing what and when. It will keep the implementation of the activities on the right track, facilitate reporting, and ease the interaction between various stakeholders on common actions.

An Action plan should include providing information about the following information:
- Background to the National Coalition
- National Coalition structure and contact details: emails, website, social media
- Main objectives of the National Coalition
- Key actions and milestones
- Communication activities
- Partners involved

5) Create a brand or label for a National Coalition.

There is no common branding or labelling for a National Coalition. Stakeholders are free to choose names for their National Coalition as they find fitting, taking into consideration how a name can facilitate outreach and communication of the National Coalition nationally.

If the National Coalition plans to join/collaborate with European Commission's Digital Skills and Jobs Coalition (EC DSJC) in a strategic perspective, messages accompanying the National Coalition's name should reflect the relationship with the EC DSJC after joining one (in case of collaboration visual identity can be discussed). The EC DSJC visual identity can be obtained from the Digital Skills and Jobs Team (*https://ec.europa.eu/digital-single-market/en/news/scaling-digital-skills-and-jobs-coalition-new-support-team-starts-work*).

6) Organize an official launch event.

To do so, stakeholders should organize a launch event with stakeholders including key stakeholders and the media. Activities during the launch event can include signing a memorandum of understanding, informing the public about the launch of the National Coalition, present the action and dissemination plan, etc. The media should be invited and activities of the launch event should be shared on social media.

There is no strict definition on what a launch event can entail. It may be as simple as a meeting signalling a point in time that henceforth the coalition is active; it can also be a public high level meeting wherein the head of government may be present. It is also possible that the actions of the coalition may start before the launch event.

4. DESCRIPTION OF THE TYPICAL ACTIVITY OF THE NATIONAL DIGITAL SKILLS AND JOBS COALITIONS

It is important to National Coalition to identify the problems that the National Coalition needs to address. National Coalitions should identify key challenges it needs to address at local, regional or national level. These should be also adapted on the capacities and resources the emerging National Coalition has at its disposal. The process of identifying, prioritising and selecting the problems to be addressed is of utmost important, as it will form the strategy per which key actions are will be formed.

National Coalition can have a stakeholder that will identify the digital skills gap. Bridging the digital skills gaps may not mean bridging a digital jobs gap, but promoting digital skills to sectors of all citizens as government and public services are digitized, to ensure basic services remain efficient and accessible for everyone.

Identifying key digital skills and competences challenges in the country can start from learning the situation in the field of digital knowledge providers and digital skills programmes. Preferably, this process should be divided into two directions according to the following levels:
- Basic and intermediate digital skills (digital skills needed to succeed in work and life)
- Advanced digital skills (specialized digital skills for performing tasks in ICT sphere)

Basic and intermediate digital skills

NDSJCs need to ensure that everyone has the basic digital skills to function in society as well as opportunities to gain intermediate skills that improve employment prospects and enable more meaningful uses of technology.

Developing opportunities for people to learn basic and intermediate digital skills begins with establishing clear goals: e.g. providing school children with early exposure to digital skills and computational thinking, providing young people with the skills needed to develop successful careers in the digital economy, and creating multiple pathways for adults to build skills at different stages of life. Countries are encouraged to identify and overcome the challenges on the way to achieving these goals first of all by considering existing channels and programs which provide digital skills training.

To review existing institutions in the country (that currently offer digital skills programmes as well as those that have the potential for doing so) the following table can be used:

Digital knowledge providers	Number of institutions	Geographical coverage	Infrastructure (connectivity, computer equipment)[1]	The level of qualifications / skills of instructors[2]
For education				
Primary schools				
Secondary schools				
Non-formal education				
Community technology centers				
Hubs				
NGOs				
Private schools				
Other _____				

The Coalition should consider how each provides could support its activity.

To review existing digital skills programmes it is advisable to list them and describe their characteristics using the table below:

Programme name (formal and non-formal)	Target group	Coverage of skills (what skills are covered by the curriculum)	Outcomes produced by the program	Which organizations/institutions support this programme

The Coalition should consider how each programme could be improved, used and connected to NDSJC's activity.

Advanced skills

In addition to ensuring adequate opportunities for everyone to develop basic digital skills, NDSJCs must secure their position in the digital economy by providing pathways for some to develop more advanced and specialized digital skills. Reskilling and retraining individuals is a critical piece of this endeavour, to ensure the existing workforce remains abreast of technological changes and does not fall behind with an obsolete skill-set. A range of channels and examples for providing advanced digital skills training should be assessed by the Coalition using a tool to identify and assess providers and programmes that deliver advanced digital skills training:

Digital knowledge providers	Number of institutions	Geographical coverage	Infrastructure (connectivity, computer equipment)[3]	The level of qualifications / skills of instructors[4]
Employer-led training				
Technical and vocational training, higher education				
Coding bootcamps				
Other commercial training providers				
Online educational resources				
Individual trainers				
Other _____				

The Coalition should consider how each provides could support its activity.

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[1] Coalition can develop its own scale for assessing the degree (e.g. poor / enough / excellent)
[2] Coalition can develop its own scale for assessing the degree (e.g. low / medium / high)
[3] Coalition can develop its own scale for assessing the degree (e.g. poor / enough / excellent)
[4] Coalition can develop its own scale for assessing the degree (e.g. low / medium / high)

To evaluate the quality of existing digital skills programmes offered by these training providers it is advisable to list the programmes and describe their characteristics using the table below:

Programme name (formal and non-formal)	Target group	Coverage of skills (what skills are covered by the curriculum)	Outcomes produced by the program (incl. job placement rates, impact on the industry and innovations)	Which organizations/institutions support this programme

The Coalition should consider how each programme could be improved, used and connected to NDSJC's activity.

All above provided tools will be also very helpful in searching new members of the NDSJC.

Depending on identified problems in digital skills and competences sphere different types of activity can be undertaken by NDSJCs in order to overcome challenges identified. The Shared Concept (created by the European Commission and representatives of the Member States gathered in the Digital Single Market working group on digital skills) includes a list of suggested activities that National Coalitions can implement in their priority areas, through their action and dissemination plans. (*https://ec.europa.eu/digital-single-market/en/news/shared-concept-national-digital-skills-strategies*).

EDUCATION

1) Ensure that schools and training institutions have good quality ICT infrastructure including a good broadband connection and that teachers, trainers and students have a range and a sufficient provision of different technological devices and software for use in educational contexts.

2) Support sustained investment and funding for the continuous updating of tools and digital pedagogies/methods in education.

3) Systematically consult a wide range of stakeholder groups involved in digital skills and ICT and explore how to best design & implement curricula and concrete teaching & learning to enable up-to-date content and pedagogies. Promote tried & tested digital pedagogies.

4) Teach children and young people how to use digital technologies already at a young age and throughout the education system. Help students learn how to learn and work with technology.

5) Include computer science courses, including computational and creative thinking, as well as cyber security and media literacy in compulsory and tertiary education.

6) Encourage the provision and use of open educational resources and lifelong learning offers, such as open online courses or mobile and app-based education, and enable their recognition with formal education and for employment.

7) Update initial teacher training and qualifications, in light of fast changing ICT, including their validation and formal recognition.

8) Increase and improve continuous professional development for teachers and trainers to raise their awareness as well as level of digital skills, help them understand the impact of digital technologies on their specific subject and encourage them to use innovative/digital pedagogies.

9) Encourage teachers to create digital content, including learning materials. Provide guidance to teachers on coding and computer programming tools for elementary schools.

10) Attract and facilitate career mobility from industry into teaching.

11) Strengthen ongoing dialogue and closer cooperation between industry, education and government as well as social partners.

12) Encourage and incentivise organisations to offer good quality, paid traineeships, apprenticeships and other types of work-based learning in the field of ICT and digitisation.

13) Encourage companies to provide schools with free or discounted access to software and platforms for educational purposes.

CITIZENS

1) Support and encourage the take up and development of e-competence frameworks such as the European Digital Competence Reference Framework (DigComp) in the Member States to foster a common understanding of digital competences across the country and to make sure it remains relevant.

2) Identify the main groups within the population with no or low levels of digital skills (e.g. low educated, elderly, low income, disabled etc.), determine the specific issues they face and develop tailor-made support for each group in order to encourage their use of digital technologies and development of digital skills.

3) Design and carry out targeted awareness-raising campaigns for identified target groups (to promote the benefits of using digital technologies and learning digital skills, to encourage the use of digital (public) services,

to inform and educate people about how to use ICT in a responsible and secure way.

4) Develop and implement 'digital by default' policies across all public services, to demonstrate the benefits of digitisation (of services) for people's daily-lives and encourage digital adoption and skills. They should also include incentives and support for the use of digital services, adapted to the needs of different groups.

5) Design and implement low-threshold, tailor-made, basic digital skills (digital competence) training and further education opportunities for people with low levels of digital skills, including in particular the elderly, people with a low level of education, people with disabilities and people with a migration background.

6) Support in particular libraries, NGOs and volunteers who offer training in digital skills, involving people lacking computer literacy into local digital communities.

7) Make e-learning and other open learning resources (environment as well as content) more readily available to citizens.

8) Encourage the spread of intergenerational models (the young teaching the old) to support the acquisition of digital skills by older people.

9) Use crowd-funding to support social innovation platforms to provide training (e.g. in coding) open to all, with a focus on under privileged youth.

10) Support lifelong learning of digital competences to ensure that adults are kept up to date with these competences

LABOUR FORCE

1) Improve data on digital skills needs anticipation and analysis by: making use of advanced web analytics tools (e.g. web crawling for job offers); seeking evidence from different sectors in order to understand digital skills needs in ICT-using industries; taking into account geographical scope, i.e. understanding the needs at national, regional and local level.

2) Encourage adoption of e-competence frameworks for businesses, as well as its update based on relevant feedback and new technological developments.

3) Establish closer contact and exchange of information between the public and private sector and between industry and education, since companies are best placed to understand work-based skills needs (e.g. by surveying companies and through sectorial approaches).

4) Get employers to commit to train and re-train their workforces and implement lifelong learning policies, for skilled and un-skilled workers alike, to strengthen digital skills at all levels and accompany it with appropriate certification.

5) Identify digital champions within companies to follow the technology trends and lead the update and introduction of new digital skills to keep up the labour force updated.

6) Support schemes whereby the unemployed can have access to digital skills through short term programmes, possibly on the basis of existing local demand.

7) Make use of European funds to enable training in digital skills.

8) Carry out awareness raising activities (e.g. public dialogues or conferences on the need to reskill and up-skill the labour force) to inform and convince managers of SMEs and entrepreneurs in all sectors of the potential and relevance of digital technology for their businesses.

9) Support SMEs to train their staff. Collective training and funding solutions could be found through promotion of collaboration within their SME ecosystems and local suppliers.

10) Ensure all civil servants are adequately digitally skilled for successful implementation of "digital by default" policies, using digital skills to improve professional, personal and social capabilities in a life-long learning perspective.

11) Raise the awareness of workers and companies about the benefits of digitisation in the work place and obtain better evidence about the impact on the labour market to avoid speculation and fears of job destruction.

12) Elaborate widely accessible career guidance for citizens in order to open for them an access to information about future jobs opportunities to guide them in their training/educational choices.

13) Foster a community around progress in developing digital skills for labour forces and ensure regular meeting points and events.

14) Promote the uptake of digital skills for managers ("eleadership" skills), including skills to support entrepreneurship.

ICT PROFESSIONALS

1) Undertake awareness raising actions to attract young people, especially girls, to ICT; for example by sending IT professionals to schools to talk about careers in ICT.

2) Encourage and support students', particularly girls, interest in IT professions and career choices through the formal education system (e.g. curricular measures) as well as non-formal and informal (NGO's etc.) education.

3) Strengthen ICT professionalism in the country and scale-up country-wide and national initiatives to define and foster the highest standards for the ICT profession.

4) Take measures to increase the numbers of young people studying and graduating in ICT, for example through offering study grants or stipendia, and reducing drop-out rates from ICT and STEM studies.

5) Support the development and spread of short-term training programmes for young people (ICT and other graduates) to take up ICT jobs.

6) Encourage and facilitate internships in companies' IT departments.

7) Support the recognition and transparency of digital skills acquired in informal and non-formal education and ensure their consideration for further formal education.

8) Encourage employers to take a bigger responsibility to continuously train their workforce and encourage voluntary professional development.

9) Develop Lifelong learning programmes for ICT professionals.

10) Ensure that there are training opportunities available in higher education for up-skilling of ICT professionals, addressing the needs of new emerging areas such as data-driven science and cybersecurity.

11) Update and up-skill older professionals with the new technologies, including the old ICT professionals who may have retired but they still have a lot to give.

12) Mobilise social partners to find joint solutions to retrain the ICT workforce.

Provide opportunities for people in other careers, the unemployment or those who did their education in other fields, training towards a career in as ICT professional and other digital jobs.

Organizing campaigns and multi-stakeholder initiatives is an integral part of the NDSJCs'.

These are one of the main means for building awareness, creating excitement, and motivating people to learn digital skills. Campaigns are particularly effective for focusing national attention, engaging partners, and launching major programmes. Many campaigns include festivals, hands-on demonstrations, or other live events that can be held in a single location or across hundreds or thousands of voluntary sites. Campaigns are often targeted to populations that are at risk of being left behind – e.g. women, out of school youth, and persons with disabilities. A tool to identify opportunities for organizing a campaign or multi-stakeholder initiatives indicated below:

The first step is to identify national objectives targeted by campaign or multi-stakeholder initiative. Possible objectives can include: to raise awareness, launch an industry partnership, target a population group or underserved area of the country, etc.

The second step is to identify regional or global campaigns or multi-stakeholder initiatives that could be joined or offer a model for a national adaptation and describe how the campaign/initiative would be relevant to the country context.

Campaign / initiative title	Objectives	Description of idea

5. LEGAL PECULIARITIES, TYPICAL STRUCTURE AND MANAGEMENT SYSTEM OF THE NATIONAL DIGITAL SKILLS AND JOBS COALITIONS

While some National Coalitions may seek a formal legal status, they do not need to be officially recognized legal companies (private, public or NGOs). They can remain as informal partnerships among stakeholders from multiple sectors who share a common objective. Registering as a legal entity may be a strategy to attract necessary funding and improve coordination of the coalition. The most relevant form of a legal entity for the National Coalition may be that of a NGO or social enterprise.

Given the degree to which digital skills touch every aspect of work and life, many countries' goal is to ensure that a broad, representative group of stakeholders engage in the process of developing a digital skills and competences.

It is important to outline some of the most common stakeholders that should be engaged. In particular, since digital divides tend to exacerbate other social divides, it is crucial that groups that are often excluded from policy-making processes have a voice.

Government agencies, national and local authorities (e.g. education, enterprise, employment services and information society services): since digital skills are needed to participate effectively in every aspect of life and work, it is important to engage all relevant ministries and departments in shaping a digital skills sphere. It is common for the following to be included:
• Digital Economy/ICT/Telecommunications;
• Labour/Workforce development;

- Education;
- Culture/Public libraries;
- Health;
- Rural development.

Educational institutions (education and training providers): educational institutions play a critical role since they provide learning pathways for such a wide proportion of a country's population. Most countries take steps to incorporate digital skills training into their educational institutions. This entails having representation from all levels of education, including primary and secondary schools, technical and vocational institutions, colleges and universities.

Private sector (e.g. ICT and ICT-using industry players, chambers of commerce, private employment services etc.): it is very important to engage the private sector, not only to ensure that digital skills plans meet workforce needs and companies' technology deployment plans, but also to involve them in the planning. For example, the private sector may be positioned to provide skills training, including on company online platforms, or incentives for their staff continually to develop their digital skills – an important role for reskilling the existing workforce when dislocations occur due to automation and other job-replacing technologies. The international private sector too can play a role as foreign technology companies are often keen to contribute to building a country's digital skills base. And, mobile operators are becoming increasingly involved in digital and mobile literacy efforts as they recognize that it makes good business sense to support more people in acquiring digital skills.

Civil society (e.g. NGOs, youth associations, employer federations, library networks, etc.) the involvement of civil society is just as important. Civil society organizations that represent the interests of ethnic minorities, persons with disabilities, youth, women and other target or marginalized groups can ensure that digital skills planning meets the needs of these populations. Public and community libraries, NGOs, think tanks, and community centres offering educational programmes are also important actors because of the role they play in providing lifelong learning opportunities in many countries.

Non-formal providers of digital skills training: non-formal training providers such as commercial and social enterprise coding bootcamps, volunteers who have taught digital skills as part of a national, regional or international digital skills campaign, as well as tech clubs, hubs and maker spaces – all of these can provide informed advice and guidance on developing a national digital skills training programme and are likely to play a key role in implementation.

National Coalitions cover a whole state territory and can include a ministry or government agency, or are endorsed by a state ministry or agency. The coordination of a National Coalition often includes or is solely coordinated from a ministry or government coordinator, though in EU this remains a practice more than a rule.

National Coalitions are also coordinated through industry partners that operate on a national level, the digital champion, and non-governmental agencies that operate on a national level. In all cases the coordination of a national coalition should be open and capable of bringing together a broad number of stakeholders across the whole country, and be capable of coordinating activities that can operate nationally. It is important that if the coordination of a national coalition were to be changed the National Coalition structure would still survive.

Coordinators serve mostly to administer the national coalition, rather than manage it, this can and should be shared between members. Some of these activities can also be tailored to meet the needs of certain marginalised groups, and thus can be focused on a subnational level.

National Coalitions are free to decide how they wish to govern themselves. This can include agreeing to a Memorandum of Understanding. There are different structures of governance

including some coalitions are governed through a core secretariat or steering committee which meets on a regular basis to ensure development of the coalition.

Ideally, NDSJCs should built theirs work by means of concrete action plans most appropriate to the national circumstances. A round-table format is ideal to develop and plan an action plan.

To ensure to coalition remains inclusive, there should occasionally be meetings or conferences that are open to all members and potential stakeholders.

Looking at the experiences of current National Coalitions, it is highly recommended to appoint a coordinator to a National Coalition. The coordinator can be an organisation or a person, and would have the following responsibilities:

1) Facilitate communications for the National Coalition (internal and external communications)

2) Monitor the development of the action plan and evaluate the action plan of the National Coalition

3) Develop the National Coalition by engaging new stakeholders to take part in the National Coalition

4) Act as a contact point with the external stakeholders

Some National Coalitions can divide coordination responsibilities between different partners to ensure a balanced workload. For example, one coordinator could maintain a website and social media channels, one coordinator would be responsible for reporting, and yet another coordinator would be responsible for dialogue within the coalition. The is no standard on how much time should be dedicated to coordination duties, this can vary very much depending on how much the duties of coordination is supported financially, or how much the coordinating organisation is willing to allow their employee to spend working on the coalition. If funding and support permits, a fulltime coordinator may be possible, though this is not always common practice.

Taking into account above described functions it becomes possible to draw up a draft of typical functional structure of the National Coalition.

Coordinator / Coordinating body			
Thematic levels	**National Coalition's working groups**		
	Digital skills for all (citizens)	**Digital skills for the labour force**	**Digital skills for ICT professionals**	**Digital skills in education**
Basic digital skills	Basic computer skills (using keyboards and touchscreens; sending e-mails; using basic/common software (Word, Excel, e-mail interfaces, etc.) to communicate and get necessary information)	Basic digital skills (for performing elementary assigned non-ICT professional duties (using Word, Excel, Power Point, Photoshop, e-interfaces), office administration, getting necessary professional knowledge, etc.)	Basic knowledge of programming languages (C, C++, C#, Java, Java Script, etc.)	Basic computer skills (using keyboards and touchscreens; sending e-mails; using basic/common software (Word, Excel, e-mail interfaces, etc.) to communicate and get necessary information within educational processes)

Intermediate digital skills	Basic computer skills and ability to use common software (Word, Excel, e-interfaces for administrative services centers, etc.) to get basic administrative services for citizens/users and solve household everyday tasks	Digital skills for controlling business processes (using common and specialized software for coordinating other subordinated personnel / partners / stakeholders)	Using programming languages (C, C++, C#, Java, Java Script, etc.) for creating a common software	Digital skills for elaborating educational curriculums and creating relevant content
Advanced skills	Ability to use common software for creation new content for citizens	Ability to use digital skills for creation new content/coordination business processes in order to make added value (e-commerce, cyber security, managing the big data)	Using programming languages (C, C++, C#, Java, Java Script, etc.) for problem solving (business, cyber security, etc.) and creating new software	Ability to teach on how to elaborate software using programming languages (C, C++, C#, Java, Java Script, etc.)
Target skills for stakeholders			