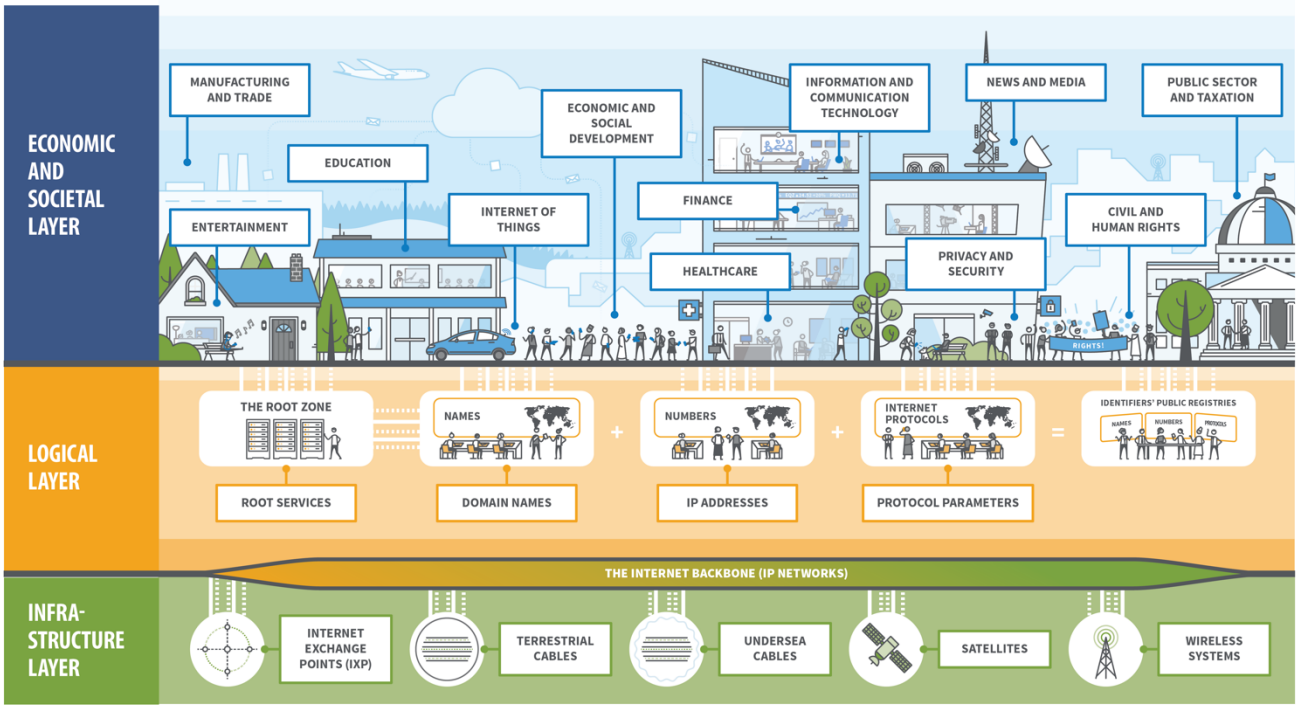
DIGITAL NORMS

CO-GOVERNANCE SYSTEM FOR A TRUSTED DIGITAL WORLD

By Fadi Chehadé and Nora Abusitta

CONTEXT

The digital world can be stratified into three layers (depicted below): the lower (green) Infrastructure Layer containing the 70,000+ distributed IP networks that connect our 25+ billion devices (soon hundreds of billions); the middle (orange) Logical Layer providing the unique identifiers that ensure that the billions of devices connected to the Infrastructure Layer can find each other – as if they were on 'one Internet'; the upper (blue) Economic & Societal Layer comprising all the human – and increasingly machine – activities that take place every day *on top of* the Internet's Infrastructure and Logical Layers.

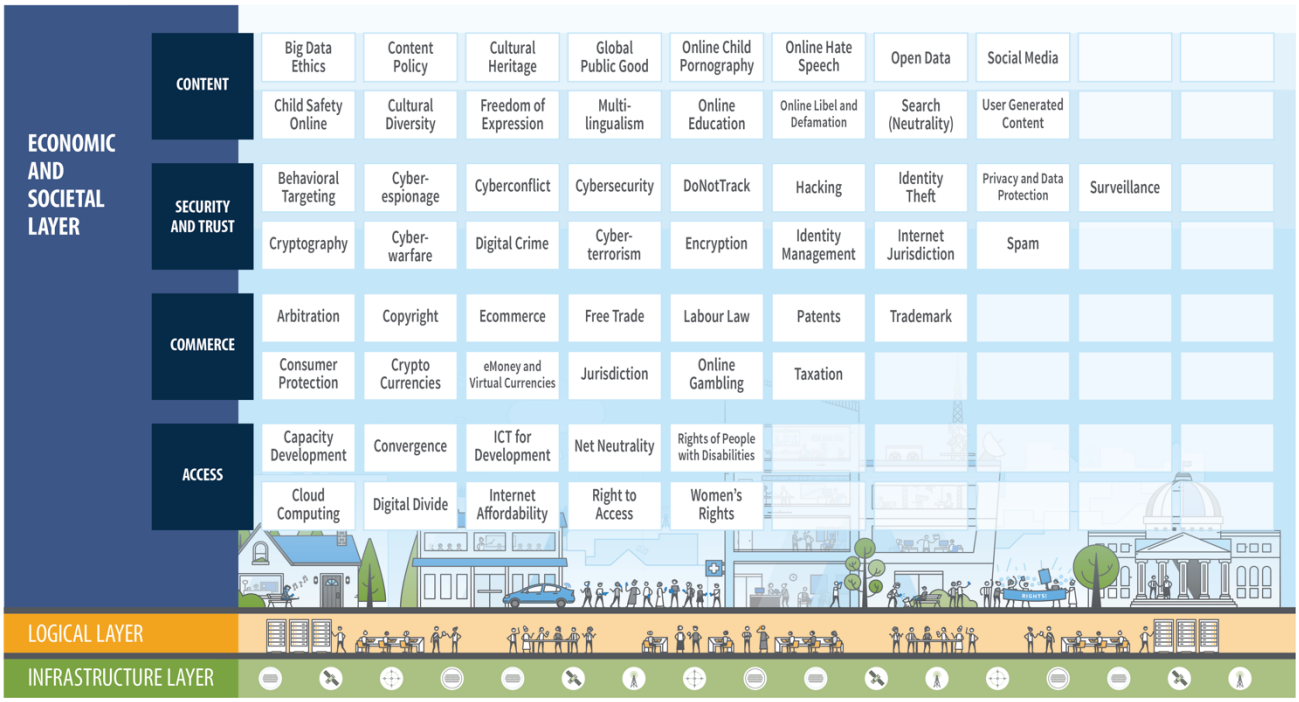


Since the foundation of the Internet, technical policy experts from public, private, and civic stakeholders successfully built orderly systems, mechanisms, and institutions to design and deploy norms, policies, and protocols governing the two lower layers. The upper Economic and Societal Layer does not have such well developed systems yet[1], and thus lacks the necessary norms that would strengthen trust, innovation, and security in the increasingly digital world.

The forces of digital technology will relentlessly continue to permeate and transform society and our global economy – 84% of the S&P assets are now intangible. It is therefore urgent for all stakeholders to

[1] HENRY KISSINGER, WORLD ORDER (2014), at 341-347.

establish the necessary system and mechanisms that will produce norms to govern the many current and emerging digital issues in the Economic and Societal Layer (depicted below).



However, producing coherent digital norms for this upper layer will be a significant challenge because we face a wide gap in understanding the complex nature of designing and implementing digital norms – a gap across all sectors, public, private, and civic. This gap is exacerbated by the Internet's transnational nature, the speed of its borderless reach, the relentless digital innovations it enables, and the emergence of powerful digital platforms operating 'without borders'.

GAP IN PUBLIC SECTOR

The 20th century idea that the nation-states are the sole deciders and guarantors of norms no longer stands in this digital age. Most of the Internet's infrastructure and applications are operated by the private sector without borders and across multiple jurisdictions, often rendering our current national and international system incapable of addressing rule-setting, security management, and conflict resolution in a satisfactory way at 'Internet-speed'.

National governments and inter-governmental organizations are struggling to keep up and address the ever-growing number of digital issues and opportunities affecting the world's economy and society. For example, most national governments are genuinely worried about their central security role and must decide if they will try to assert themselves as the sole guarantor of their country's digital security, or if they will choose to cooperate with other private and civic stakeholders to jointly design responsible norms. In another example, technological advances in artificial intelligence, autonomous systems, and the Internet of Things (IoT) are transforming labor markets (and especially middle-class mobility) in ways governments must learn to address fairly in cooperation with private and civic actors.

Furthermore, within the functional ranks of government ministries and regulators of most countries, there is a serious gap in understanding how to design and adopt national digital norms that are

synchronized between the geospheres (local – national – regional). The transnational nature of the Internet makes geo-synchronization (which is not necessarily policy harmonization) critical for the integrity of both the Internet's national and global infrastructure and data flows. That understanding is often limited, non-existent, or rooted in past telecom/infrastructure policy frameworks which are not always applicable. The gap in governmental understanding often leads to frustrations, uninformed decisions, and the erection of harmful digital barriers – further fragmenting the world's economy.

GAP IN CIVIC SECTOR

There is a growing loss of trust and genuine insecurity amongst digital users and citizens[2]. The quaint idea – often espoused by technical Internet pioneers and enthusiasts, that all digital activities must remain 'open and permission-less', no longer stands the scrutiny and pressures of users and authorities increasingly concerned with issues of privacy and security. Most users now believe that norms and restrictions are required to balance the competing interests of various stakeholders and stop the deterioration of trust in the digital space.

Yet, as citizens across all social strata and geographies find their lives and work irrevocably digitized, they still don't understand how to effectively make their voices heard in the national and transnational digital norm setting processes which are dominated by companies, governments, or their proxies.

GAP IN PRIVATE SECTOR

In a digital and data-centric age, the assertion of most corporations that they are not responsible for the impact of their products, and services on economies and societies is no longer credible. Powerful corporations operating transnational digital platforms wield growing influence that directly affects the lives and economies of billions of citizens. Recent events involving several Silicon Valley leaders demonstrate how ill prepared they often are to understand and act on their responsibilities.

This gap in corporate understanding — sometimes compounded by a focus on profit at all cost — leads to confrontations with their own customers and employees, the authorities, and other stakeholders. Several leaders of digital businesses recently began to acknowledge the need for rules and conventions[3], recognizing that the lack of norms will adversely affect business growth and further erode trust in the digital world.

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In summary, all stakeholders must close these understanding gaps and evolve beyond 20th century governance systems to effectively address the complexity of the transnational digital world, which operates both within and beyond the security and jurisdictional frameworks of the nation-state and international regimes.

We now need a modern, agile, and legitimate governance system for the digital age, to produce actionable digital norms that are co-designed and adopted by all relevant stakeholders. These digital norms are absolutely necessary to maintain economic growth and innovation, limit the weaponization of critical infrastructures, autonomous systems, and the IoT, and strengthen trust in the digital world for the billions of connected people.

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[2] Edelman Trust Barometer, Edelman Communications, January 2019.

[3] BRAD SMITH, "The Need for a Digital Geneva Convention", The Official Microsoft Blog, Posted February 14, 2017

DIGITAL CO-GOVERNANCE SYSTEM

In the last few years, several prominent panels assembling some of the world's leading thinkers in digital governance have reached the same conclusion: a new system is needed[4]. A panel chaired by Thomas Ilves during his presidency of Estonia went as far as proposing a specific architecture to operationalize a governance system[5]. The most recent high-level panel - formed by the U.N. Secretary-General António Guterres, is currently designing "soft mechanisms" for digital governance[6].

All these deliberations to date yield one clear conclusion: No one institution, corporation, government, sector, or system can rule the connected world. We need to architect a **Digital Co-Governance** system with the necessary functions, coalescing public, private, and civic stakeholders to collaboratively design and implement coherent norms addressing the digital issues in the upper Economic and Societal Layer.

A modern Digital Co-Governance system for the Economic and Societal Layer must be firmly anchored in the following **operational principles** – the same ones adopted successfully for decades by stakeholders in governing the two lower digital layers (Infrastructure and Logical):

- Polycentricity: highly distributed yet efficiently and loosely coordinated across specialized centers;
- Subsidiarity: addresses issues at the most local level keeping 'smarts at the edges';
- Resiliency: balanced power distribution across sectors without centralized top-down control;
- Openness: transparent processes with minimum barriers and anchored in universal public benefit;
- Inclusivity: accountable, democratic, and representative of all stakeholders;
- Innovation: agile, efficient, and responsive to constant technological advances.

Once in place, the Digital Co-Governance system produces actionable **Digital Norms** which are published with (i) detailed specifications, (ii) operational procedures, (iii) implementation guidelines and incentives, (iv) verification instruments, (v) maintenance procedures, and (vi) conflict/dispute resolution processes.

The Digital Co-Governance system should decouple the process of designing Digital Norms from their subsequent implementation, enforcement and adjudication. This enables the Digital Co-Governance system to focus on producing Norms rapidly at 'Internet-speed', and publishing them for all stakeholders to consider and adopt. As such, all Digital Norms will be produced for all stakeholders freely as voluntary solutions – not legal instruments.

In itself, the Digital Co-Governance system must therefore remain void of governing authority, or any coercive, normative or enforcement powers. It should strongly encourage voluntary adoption of Digital Norms via influence, moral, or economic incentives – which may prove sufficient. Only when deemed necessary, existing local, national, regional, or international authorities may exercise their powers to spur adoption or enforce implementation through their own institutions. In such cases, Digital Norms may be transformed into policies, regulations, or laws as applicable.

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[4] Report by the Global Commission on Internet Governance chaired by Carl Bildt, "One Internet", 2016
[5] Report by the Panel on Global Internet Cooperation and Governance Mechanisms chaired by President Thomas Ilves, "Towards a Collaborative, Decentralized Internet Governance Ecosystem", 2014.
[6] U.N. Secretary General High-level Panel on Digital Cooperation.

DIGITAL CO-GOVERNANCE SYSTEM: FUNCTIONS & ARCHITECTURE

Building on the valuable findings of prior panels and existing mechanisms, the Digital Co-Governance system should be architected with the following three elements - each with its unique functions:

I. Norm Design Networks

The foundational element of the architecture comprises multiple Norm Design Networks, which are stakeholder-initiated and self-governed groups, organized to design Digital Norms. The Networks are issue-specific *horizontal* collaboration groups, dynamically coalescing experts from across the relevant *vertical* sectors and institutions[7]. Here are the main functions of the Norm Design Networks:

(i) Design (or update) Digital Norms to address a specific issue identified by the community in the most local geosphere (national, regional, and/or transnational), delivering detailed Norm specifications, operational processes, and maintenance procedures;

(ii) Provide Norm implementation roadmaps, to aid adopters with clear guidelines, incentives, and procedures for verifiable and timely implementations;

(iii) Build Norm adoption capacity, to share knowledge, resources, tools, and training programs to facilitate the voluntary professional adoption of Digital Norms; and

(iv) Define post-implementation conflict resolution processes, to address issues arising from the adoption of Digital Norms – especially when disputes include parties in different jurisdictions.

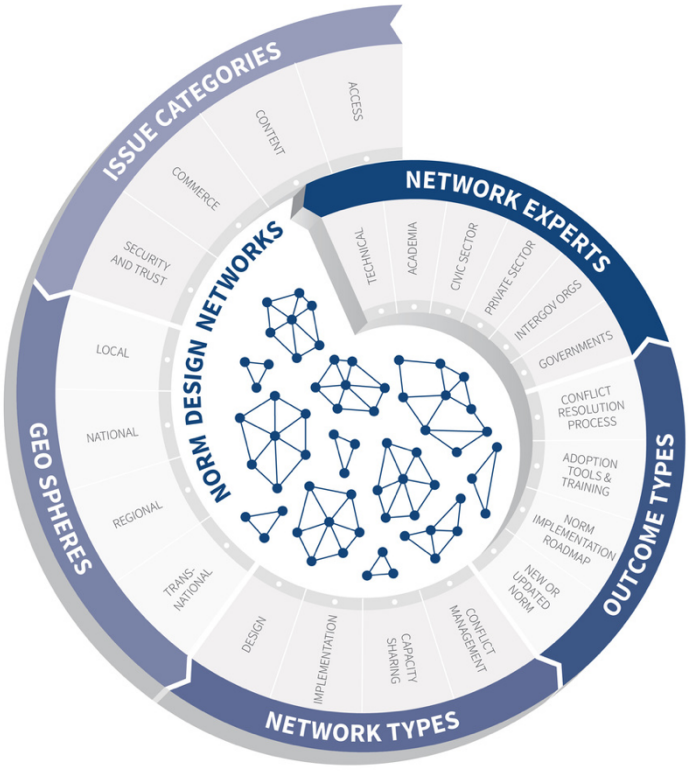
Networks are formed freely by stakeholders 'bottom-up'. The process of forming a new Network, typically involves the following steps (depicted here):

1. Identify and classify the specific digital issue in one of four categories;

2. Select the 'most local' geosphere where the Digital Norm is needed for this issue;

3. Determine the type(s) of network required;

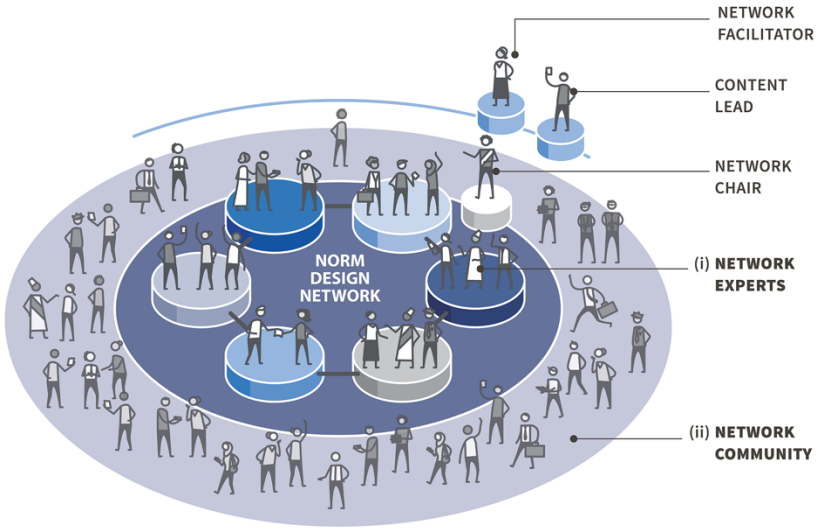
4. Agree on the outcome type(s) to be produced; and finally,



[7] *See generally* ANNE-MARIE SLAUGHTER, A NEW WORLD ORDER (2004) and THE CHESSBOARD AND THE WEB: STRATEGIES OF CONNECTION IN A NETWORKED WORLD (2017).

5. Coalesce the experts needed from relevant sectors to achieve the desired Network outcome(s). Norm Design Networks must be efficient, agile, and transient (typically less than 12 months). To stay nimble and inclusive, each Network would be structured in two tiers (as depicted here):

(i) A core tier of bona fide subject matter experts who commit to dedicate part of their time on a voluntary basis to produce the agreed outcome(s). This tier must remain agile and productive, and hence should preferably not exceed a dozen experts. The experts in each Network should elect their own Network Chair(s), agree on their plan, and self-organize to deliver the outcomes;



(ii) A broader tier of Network participants forming a community with full visibility on the work product of the core tier of experts and who may then provide input and guidance within specific community input windows.

All activities, logistics, and content development in a Network would be coordinated by a designated Network Facilitator and a Content Lead – essentially delivering the secretariat functions for the limited lifespan of the Network.

All Norm Design Network activities must be transparent and democratic. Network participation must remain open and inclusive for all relevant academic, technical, and policy experts, as well as relevant stakeholders from trusted institutions (e.g. governments, intergovernmental institutions, digital and non-digital businesses, civil society groups, academia, and the technical community). Community input and participation in Network activities must be open, encouraged, and embedded into each Network's activities.

Finally, it is important to note that horizontal expert networks are not a new concept in the digital space. Organizations like ICANN, IETF, W3C, the Regional Internet Registries ('RIRs'), IEEE, and others serve as platforms to host such networks in order to design policies and norms. However, all of those networks are limited by mandate to issues in the lower (technical) layers of the digital world. This proven network approach should now be extended to address the issues of the Economic and Societal Layer.

II. Network Platforms

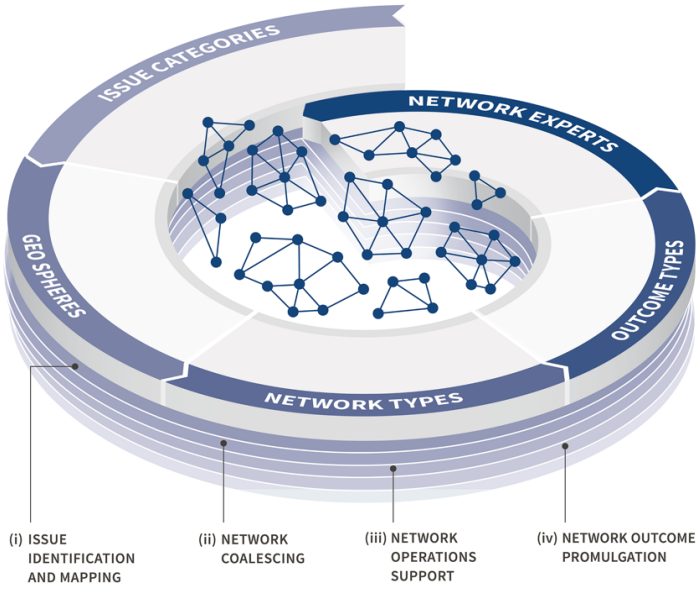
The second element of the architecture are the Network Platforms which host and enable the dynamic formation and functioning of multiple Norm Design Networks. While Networks operate in defined/limited timeframes, Network Platforms are stable long-term elements of the architecture, supporting the Networks and enabling them to regroup as necessary to update Digital Norms. Platforms should not interfere in the work product or composition of the self-governed and stakeholder-

initiated Networks: Platforms are simply supporting the Networks to operate efficiently. These Network Platforms must be trusted institutions lending their legitimacy, community, and resources to help Networks perform the following functions:

(i) Issue identification – through broad community consultations and research;

(ii) Network coalescing – to secure the commitment of relevant experts and participants across sectors and geographies – from within and beyond the Platform's own community;

(iii) Network operations support – to provide Networks with the necessary resources, facilities, and tools to support their effective functioning;



(iv) Network outcome promulgation – to ensure that Digital Norms are broadly published, promoted across the relevant stakeholder communities, and successfully adopted.

Trusted public benefit organizations, think-tanks, foundations, and globally-networked academic institutions are all good candidates to serve as Network Platforms.

The World Economic Forum is the first institution to explore the feasibility of this Co-Governance architecture. In late 2017, the Forum became the first Network Platform to facilitate the formation of Norm Design Networks.

After consultations with the private, public, and civic stakeholders at the Forum, a pilot Norm Design Network was formed to address an urgent issue concerning the fast proliferation of IoT devices. Experts were coalesced and successfully designed the first Digital Norm on Industrial IIoT public safety[8] to ensure product developers are adhering to a minimum level of software/hardware safety requirements. The Forum is now promoting the implementation of this new Digital Norm through its community.

Another very notable effort is the Internet & Jurisdiction Policy Network[9], a community driven platform that successfully coalesced stakeholders to design norms for data, content, and internet domain issues.

Network Platforms such as the Forum's and the Internet Jurisdiction will scale the rapid formation, broad participation, and effective functioning of multiple Norm Design Networks to address the growing number and complexity of issues in the digital Economy and Society Layer. Once Norms are ready, the Network Platforms also energize the adoption of these Norms through the active engagement of their own communities and relevant stakeholders.

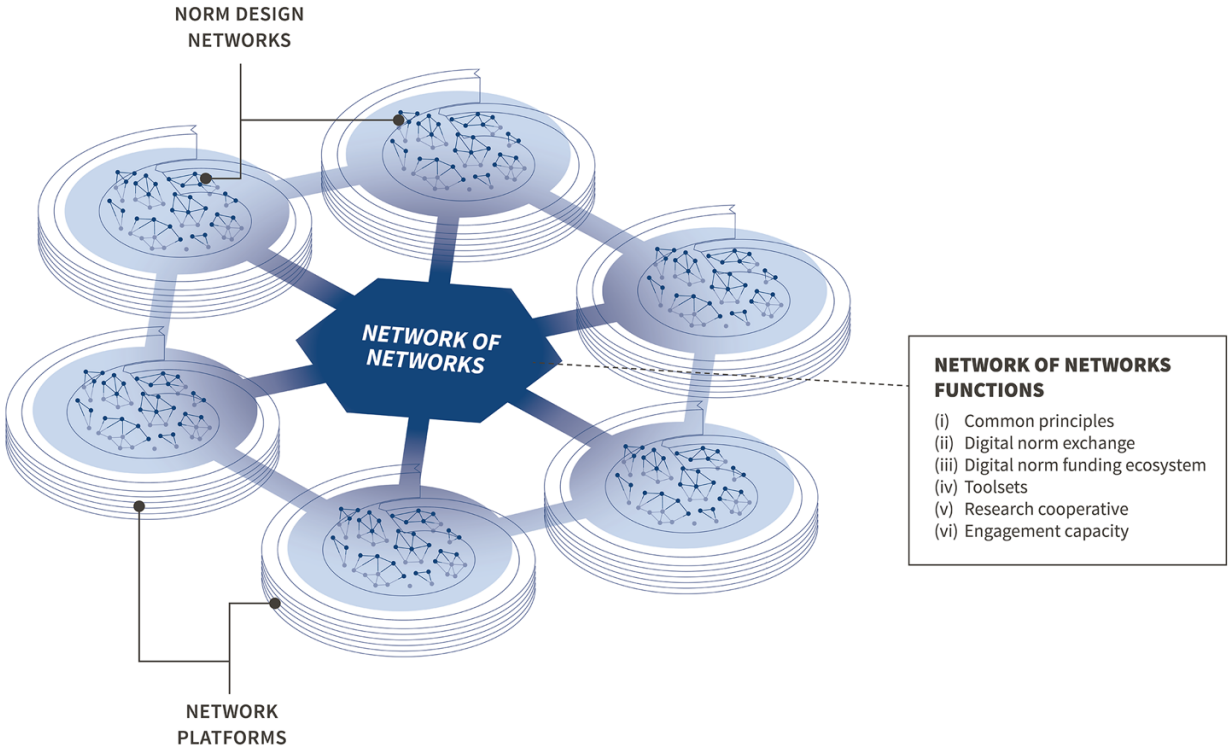
[8] World Economic Forum first Network Protocol, "IIoT Safety and Security Protocol", April 2018.
[9] www.internetjurisdiction.net

III. Network of Networks

Network of Networks is the third element of the Co-Governance system architecture designed to support and loosely coordinate activities across all distributed Networks and their supporting Platforms. The Network of Networks element is important to ensure the integrity of the whole system and enable coherent Digital Norms as digital issues and their solutions have complex inter-dependencies. The key functions of the Network of Networks element are the following:

(i) Provide Common values and principles guiding all the activities across the Digital Co-Governance system to ensure consistency, diversity, transparency and inclusivity. The values and principles adopted by the historic multi-stakeholder NETmundial[10] gathering may be an excellent reference point;

(ii) Build and maintain a comprehensive map of all issues, Norms, and associated resources – essentially a 'Digital Norm exchange' providing visibility on activities across all Networks/Platforms to ease access, insure cohesiveness, and limit unnecessary duplication;



(iii) Establish and maintain a Digital Norm funding ecosystem securing independent 'VC-like' 3rd party funding sources for Network activities when necessary, and fueling innovation in Digital Norms;

(iv) Deploy and maintain toolsets to facilitate Platform and Network operations and cross-Network collaboration using advanced web-based solutions to enable virtual activities, synchronous and asynchronous collaboration, record keeping, and broad participation;

[10] *NETmundial was a major multi-stakeholder gathering on Internet Governance in São Paulo, April 2014.*

(v) Build a research cooperative linking multiple research institutions and integrating them into the Networks to provide directly relevant support and guidance to the experts; and

(vi) Provide engagement capacity with governments, businesses, user groups, and other relevant national and international organizations, to stimulate overall understanding for the design and subsequent adoption of the Digital Norms.

EDGE POWER

While there is no limit to how many Norm Design Networks or Network Platforms are freely formed by the stakeholder community, the stability of the system architecture requires only one Network of Networks element. This is recognized by many experts who expressed the importance of this element by different names (e.g. policy clearinghouse, norm synchronization hub, etc.).

Yet, the Network of Networks element should never acquire centralization power or a controlling top-down role: to the contrary, it should actively push the resources and power to the stakeholders and Digital Norm Networks – *at the edge of the Digital Co-Governance system*.

The Network of Networks element strengthens the adherence of the co-governance system participants to the key operational principles of *Openness and Inclusivity*. However, if it develops a centralized or 'top-down' control characteristic it will run against the two other operational principles of *Polycentricity and Resiliency*, which were defined earlier as follows:

- Polycentricity: highly distributed yet efficiently and loosely coordinated across specialized centers;
- Resiliency: balanced power distribution across sectors without centralized top-down control.

These two operational principles have proved central to the success of norm setting system in the Infrastructure and Logical Layers of the digital world. They are credited for the agility and innovative nature of those systems. Indirectly, they also proved to be effective guarantors of the other operational principles of Inclusivity and Openness.

There are several approaches to ensure that the Network of Networks element does not gain centralized power or control, including one or more of the following:

a) rotating the operation of its functions once a year amongst the Network Platforms;
b) distributing its functional responsibilities between the Network Platforms;
c) establishing oversight of this element by the Network Platforms and/or the communities forming the individual Norm Design Networks.

TIME TO ACT

Digital technologies will continue to permeate, connect, and transform every aspect of the world's economy, society, as well as its physical and biological infrastructures. Yet, trust in the digital realm and its purported benefits is rapidly eroding. Failure to act will most certainly slow economic growth, fuel the weaponization of infrastructures, and increase the growing inequality and insecurity within and between societies.

To maintain stability, safety, and integrity of our increasingly connected and interdependent world, it is now imperative and urgent for public, civic, and private leaders to coalesce and architect a **co-governance system that befits the digital age**.

- Governments should embrace that governance in the digital age is more dynamic and collaborative requiring agility and innovation[11]. Government experts should actively contribute their policy expertise to horizontal networks of experts from different sectors to rapidly design norms – as they have done for years in other fields such as finance.
- Users should engage and influence the norm setting mechanisms by asserting their power as customers and citizens, as well as investing themselves in understanding their rights and responsibilities in the digital era.
- Business leaders who command growing influence in the digital world, have the unique opportunity – using their significant reach, resources, and their innate agility and innovation – to rebuild trust with society and the authorities. This must start by embracing their responsibilities to the public beyond their shareholders.

It's time for all to shape a digital order for the universal public benefit.

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[11] António Guterres, Secretary-General, United Nations. 24 Jan 2019. https://www.weforum.org/agenda/2019/01/these-are-the-global-priorities-and-risks-for-the-future-according-to-antonio-guterres/