

The Internet Way of Networking Project

# The Internet Impact Assessment Toolkit (IIAT)

Promoting and defending critical properties of the healthy Internet





**The need for environmental impact assessment... but for the Internet**



*“The Internet is a network of networks”*

... So what?



# The Internet Way of Networking (IWN)

We know that the Internet is incredibly successful. The question is: “why?”

- What are the critical elements/properties of the Internet that led to its success and ensure its healthy evolution?

The Internet Way of Networking – what is it and why it matters

- The Internet owes its success not only to the technology, but to the unique way it operates and evolves. This is what we call the Internet Way of Networking (IWN). It is how independent networks connect to one another, interoperate and, all together, form the global Internet. When the IWN is under threat, so are the opportunities and benefit it offers. In a nutshell, the Internet cannot fulfil its full potential.



# Five Critical Properties of IWN – The ideals to strive for

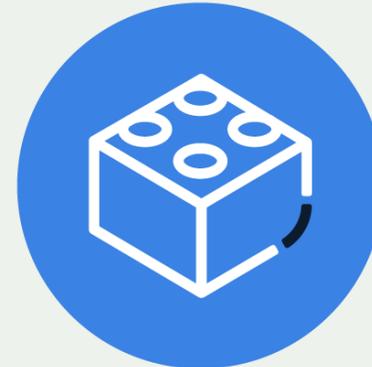
**Technology  
Neutral,  
General-Purpose  
Network**



**Accessible  
Infrastructure  
with a Common  
Protocol**



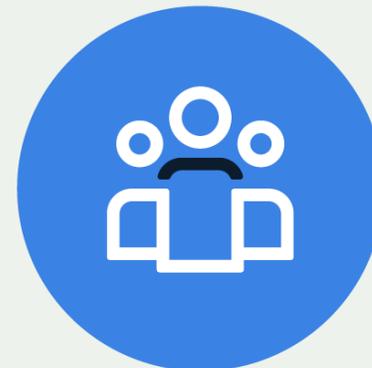
**Open Architecture  
of Interoperable  
and Reusable  
Building Blocks**



**Common Global  
Identifiers**



**Decentralized  
Management and  
a Distributed  
Routing System**



# Five critical properties and their benefits

Critical Property	Benefits to the Users
<b>An Accessible Infrastructure with a Common Protocol</b>	Unrestricted access and common protocols deliver global connectivity and encourage the network to grow. As more and more participants connect, the value of the Internet increases for everyone.
<b>A layered architecture of interoperable reusable building blocks</b>	Open architecture creates common interoperable services, which deliver fast and permissionless innovation everywhere. The inclusive standardization process and demand-driven adoption ensures that useful changes are adopted, while unnecessary ones disappear.
<b>Decentralized management and distributed routing</b>	Distributed routing delivers a resilient and adaptable network of autonomous networks, allowing for local optimizations while maintaining worldwide connectivity.
<b>A Common Global Identifier System</b>	A common identifier set delivers consistent addressability and a coherent view of the entire network, without fragmentation or fractures.
<b>A General Purpose Network</b>	Generality delivers flexibility. The Internet continuously serves a diverse and constantly evolving community of users and applications. It does not require significant changes to support this dynamic environment.

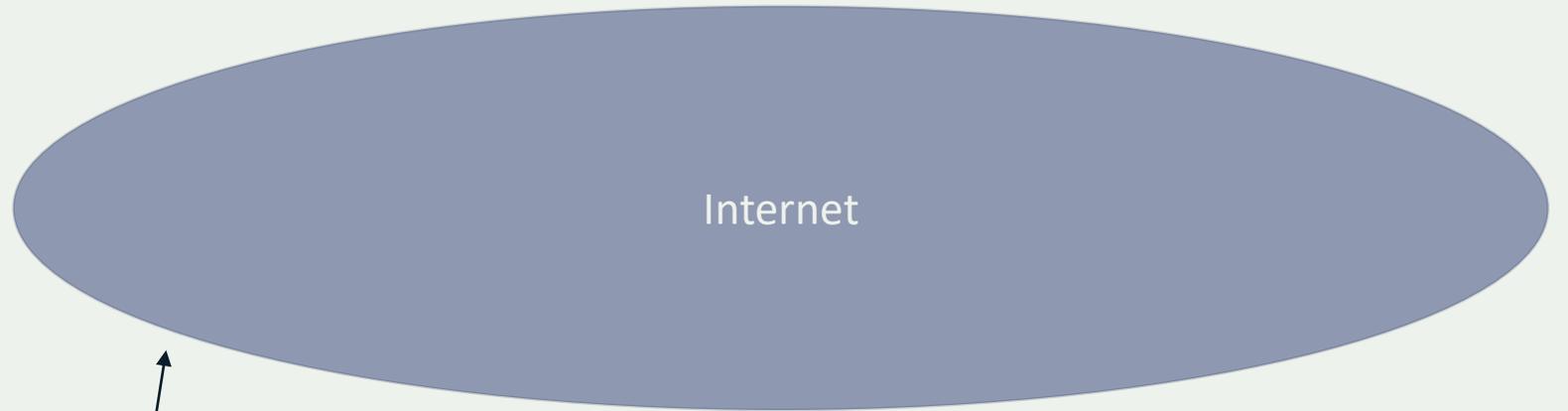




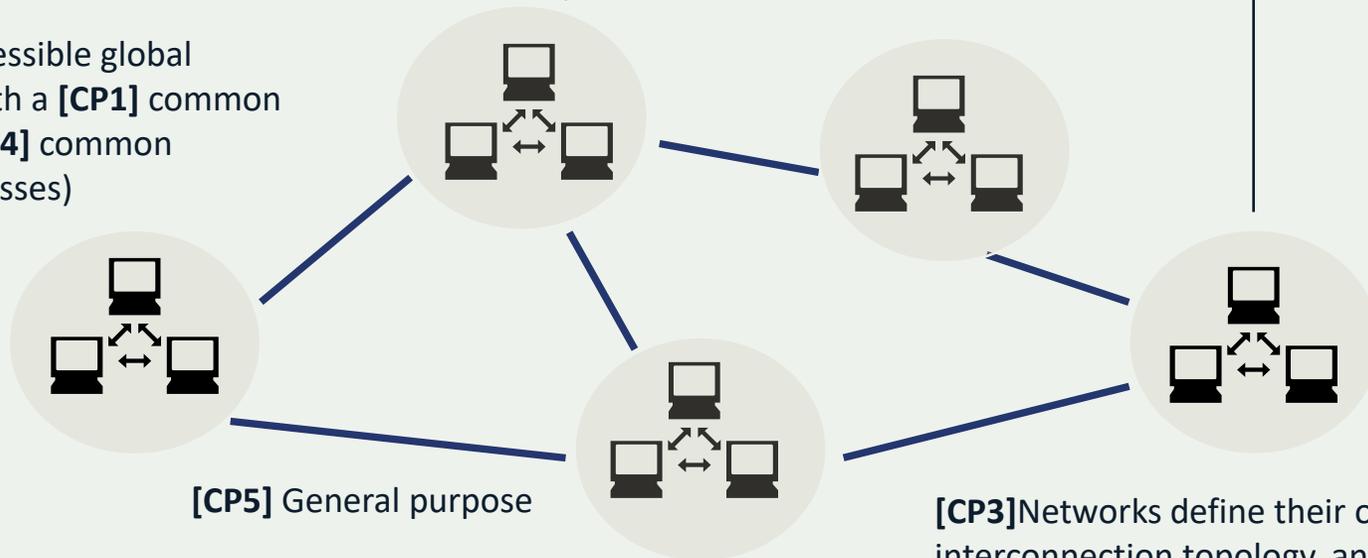
Network



Internet host



An open and accessible global infrastructure with a **[CP1]** common protocol and **[CP4]** common identifiers (addresses)



**[CP2]** Reusable common technology building blocks interoperable across layers and networks

**[CP5]** General purpose

**[CP3]** Networks define their own interconnection topology, and make their own decisions as to how to send their traffic (routing) across the network of networks

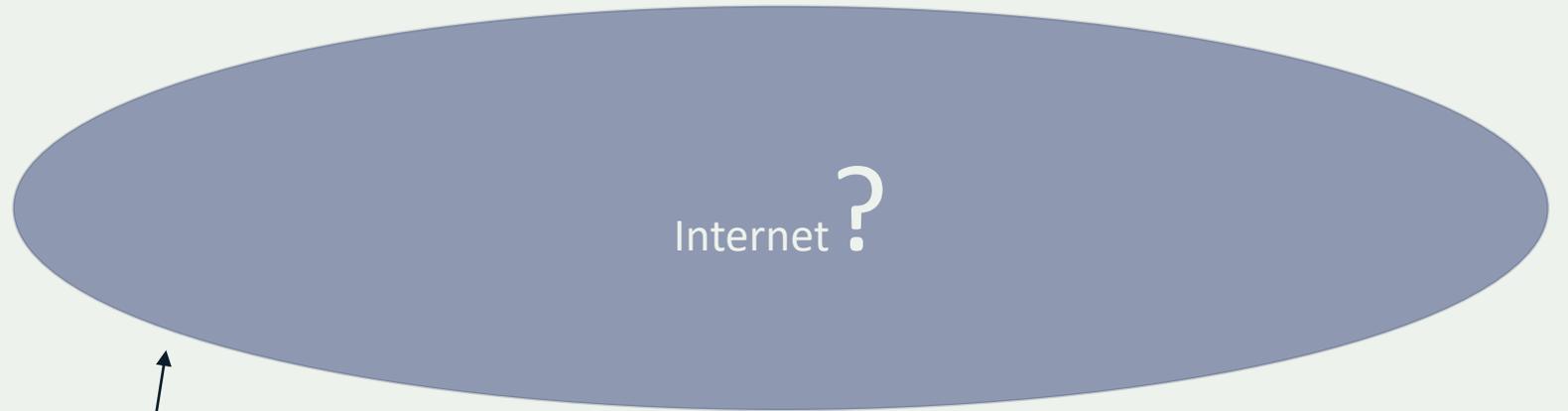




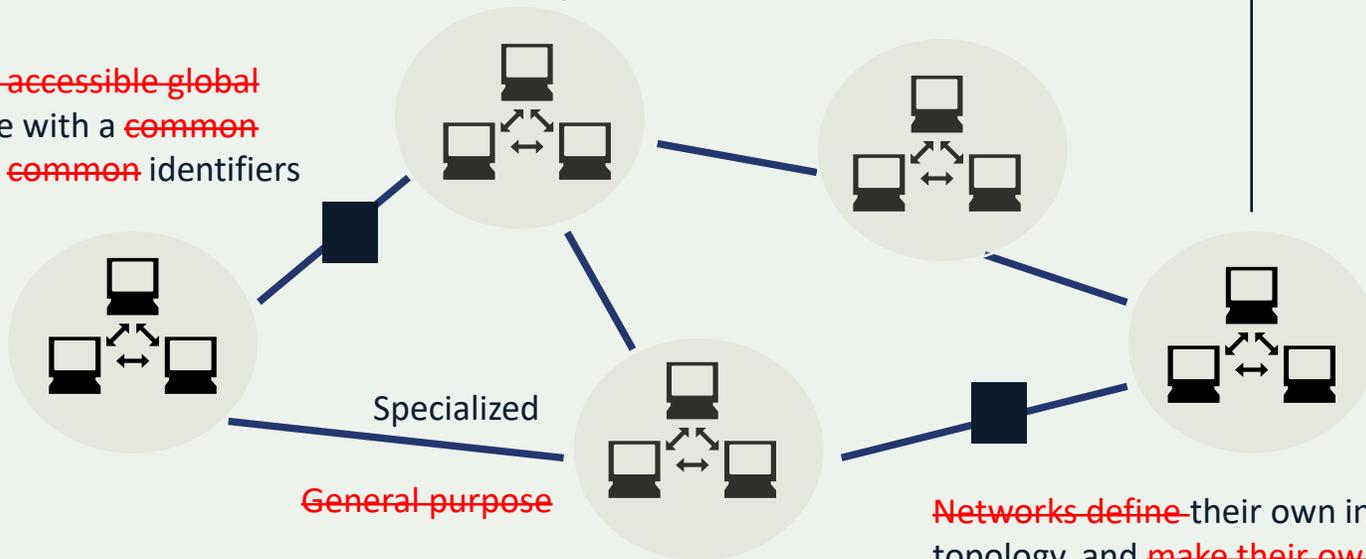
Network



Internet host



An **open and accessible global** infrastructure with a **common** protocol and **common** identifiers



**Reusable common technology building blocks** interoperable across layers and networks

**Networks define** their own interconnection topology, and **make their own decisions** as to how to send their traffic (routing) across the network of networks

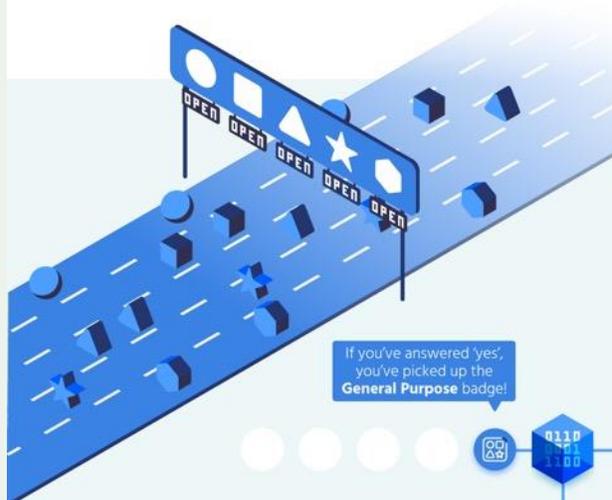


# The Internet Impact Assessment

Here are 5 questions to help you analyze whether a proposed law, decision, or trend could harm the foundation of the Internet.

## GOAL

To pass the Internet Impact Assessment, you must earn all five badges – they represent the critical properties of the Internet's foundation responsible for its success.



If you've answered 'yes', you've picked up the **General Purpose** badge!

### QUESTION 1

**Does the proposal support a technology neutral, general purpose network?**

This is the property that lets us send different kinds of content online from point A to B – whether it's connecting with friends over social media, playing video games with friends abroad, or sending your backup files to a cloud server.

It's critical because the Internet is simply a network for moving data. If the Internet was designed for only one type of traffic, it wouldn't be able to support the many ways we use the Internet today.



### QUESTION 2

**Does the proposal impact the layered architecture of interoperable and re-usable building blocks?**

This is the property that fuels virtually infinite innovation online – whether you're designing a website, or building an application. It lets us keep the Internet simple and add features quickly to end systems.

It's critical because it allows the base infrastructure and architecture of the Internet to be universally understood by network providers, routers and application providers. The layered architecture is only reliable because it doesn't change. Everything is built on those solid layers.



If you've answered 'no', you've picked up the **Universal Standards** badge.



If you've answered 'yes', you've picked up the **International Community** badge!

### QUESTION 3

**Does the proposal respect a decentralized management and common distributed routing system?**

This is the property that makes sure your email or video stream can take the **best route** through independent networks to reach its final destination.

It's critical because the Internet is a Network of Networks. There is no centralized control, no permission from a central authority – each network optimises its connectivity due to its unique circumstances or needs (price, services available, connection bandwidth, reliability, or quality). This makes the Internet agile and scalable.



### QUESTION 4

**Does the proposal respect common global identifiers?**

This is the property that helps us get to the correct destination online, whether it's a website or connecting with your work server from home.

Like an address on a postcard, every packet of data has a common accepted identifier (IP address) to help send it on its way. This property is critical because without a common way of identifying destinations for each parcel of data, we'd need to construct special gateways to help data get from point A to B.



If you've answered 'yes', you've picked up the **Common Language** badge!



Thank you.

