



DIGITAL MEDUSA

Economic Sanctions and the Impact on Internet Development in Middle East

MENOG Meeting and Peering Forum (2022)

Farzaneh Badii

Digitalmedusa.org

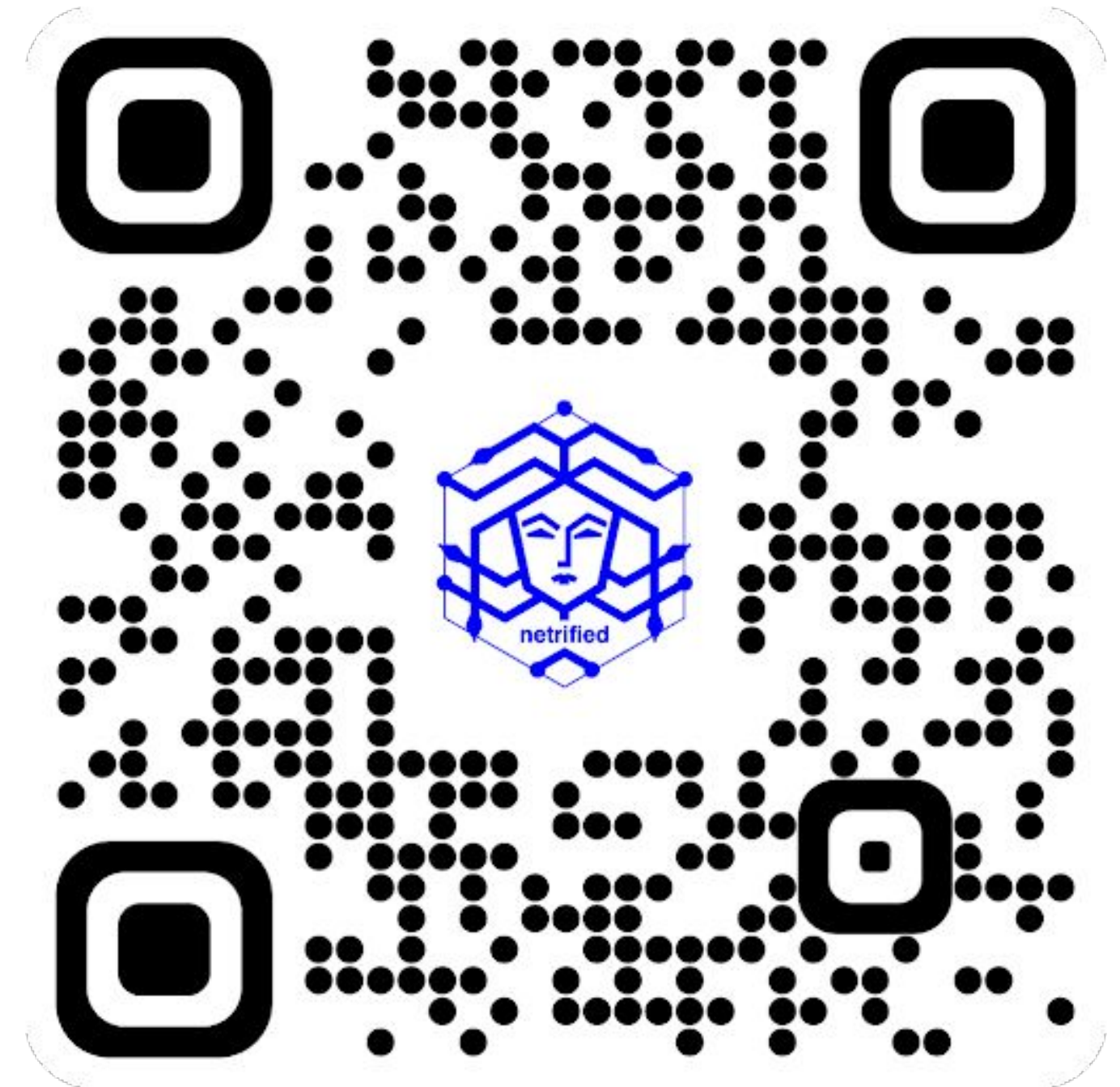
Twitter: @farzanehbad

Foreword

The collection of information surrounding this study is still In progress!

Scan the QR code to provide:

- Additional Issues
- Corrections
- Your Experiences



Objectives

- **Make informed decisions when peering**
- **Find legal solutions when peering with sanctioned countries**
- **Maintain interconnection**
- **Collect and document the unreported impact of sanctions on Internet development**



What are economic sanctions?

Various types of sanctions imposed by nation-states:

- trade restrictions (or, more broadly, economic sanctions),
- travel bans,
- the freezing of assets,
- and arms embargoes.

Economic sanctions implications for the Internet since the late 90s

The implications for the Internet have been increasing in the past decade

From early on, there have been sanction reliefs, licenses, exemptions, and regulations



Economic Sanctions and the Internet: A timeline

2001: *US, 9/11 terrorist attack.*

- More aggressive use of sanctions but more targeted.
- Tightened on Afghanistan.
- The Internet had been commercialized but had not achieved its later ubiquity.

2002: *US-Sudan*

- .SD was not operational partly due to sanctions

2010: *US-Iran & US-Cuba*

- US sanction relief for personal communication and the Internet for Iran, Cuba, and Sudan (through amending the sanction regulations)

2011: *US-Cuba & Europe-Syria,*

- Reports that Cuba could not develop its Internet partly due to US embargo,
- Europe sanctioned Syria.

Economic Sanctions and the Internet: A timeline

2012: *EU Sanctions (in place since 2007 after the imposition of UN Sanctions)*

- Affected Internet governance organizations
- They had to re-ensure that they complied with sanctions while serving certain countries (including Syria and Iran).

2012: *US-Iran*

- US sanctions Datak, an Iranian ISP (Human Rights Information Technology Executive Order)

2013: *US- Sudan*

- Sudan's civil society reported frustration with how the US sanctions affected their access to digital technology and the Internet.

2015-2019: *US-Iran & US-Cuba*

- Ease of US embargo on Cuba and specific attention to facilitate access to the Internet.
- Sanctions relief worked, but still reports of restrictions on access to Internet services

Economic Sanctions and the Internet: A timeline

2021: *US-Afghanistan*

- US withdrawal from Afghanistan and Taliban takeover
- Afghanistan IP addresses are still registered
- Challenging to verify who controls these addresses

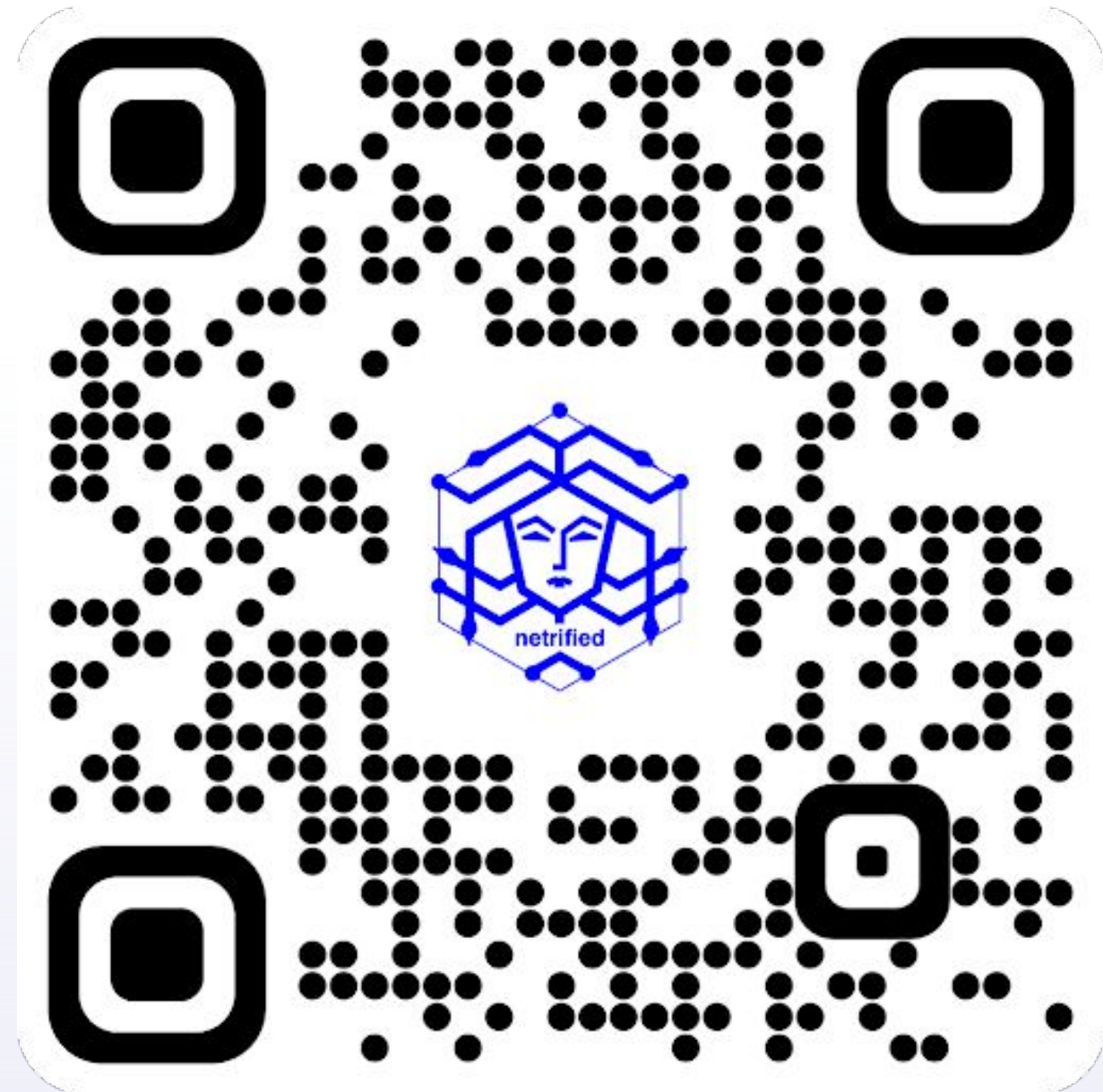
2022: *US-Iran, EU-Iran*

- The most recent US sanction relief for Iran (Iran GL D-2)
- Imposed sanctions on the Minister of Communication along with others due to Internet censorship.
- EU sanctions imposed on a local cloud service in Iran (because of tracking and filtering)

Sanctions Timeline



We want to hear from you!

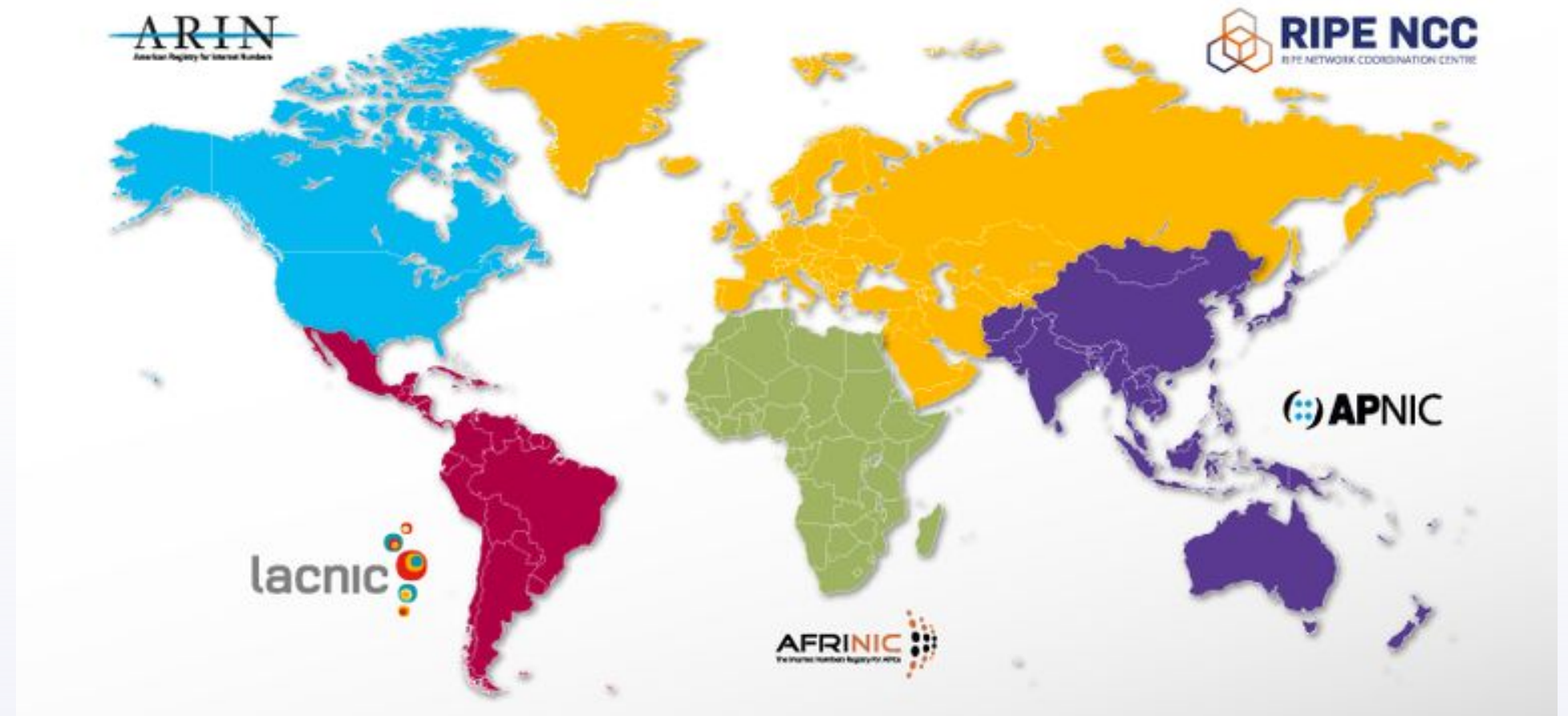


Categorizing the Impact

- Effect on Regional Internet Registries services
- Inequitable access to number resources because of indirect consequences of sanctions
- Impact of sanctions on network operators
- Impact of sanctions on Domain Name registration and Domain Name System

Impact on RIRs

- Transferring from one RIR to another
- Payment Systems
- Software providers
- RIRs new membership, assignment, allocation, or transfer requests (including End User requests)
- Cases of Iran and Syria IP Addresses



Impact on Network Operators

Revocation of membership from Internet Exchange Points/De-peering

Sanctions that apply to individuals with formal roles at Internet Service Providers: A recent case was the London Internet Exchange (LINX) that disconnected Russian Telecom operators: Rostelecom and Megaphone

Large sanctioned network operators might affect smaller ones that depend on them.

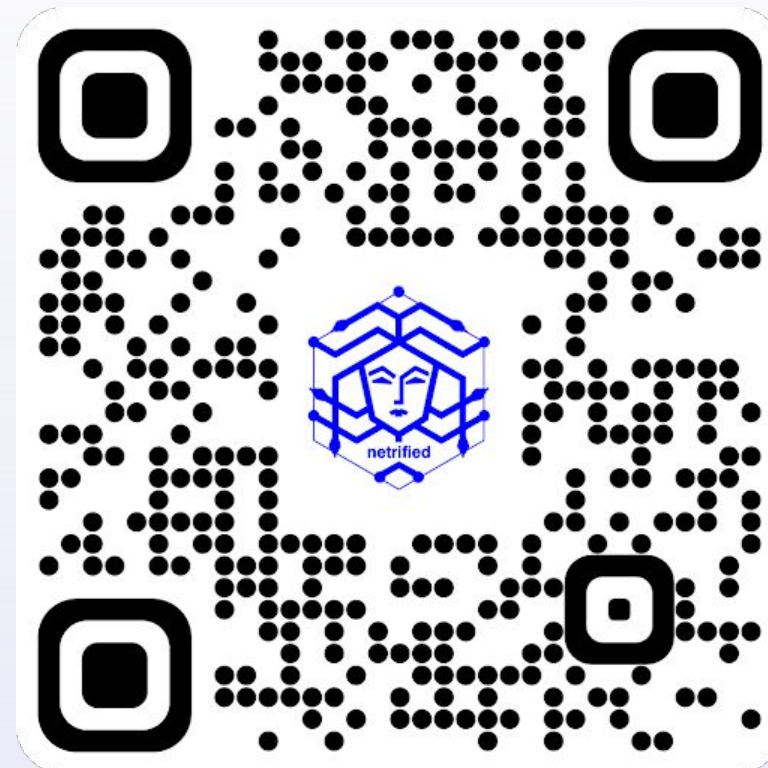
affect other network operators based in other countries that rely on operators of sanctioned country

the individual members of that exchange point will likely stop peering with the sanctioned network bilaterally.

Impact on Network Operators (cont.)

- As well as depeering, network operators might not want to peer with network operators located in sanctioned countries
- Reservations include: being fined, operational issues such as banks not willing to facilitate payments
- The cases of denial to peer because of sanctions are under-reported

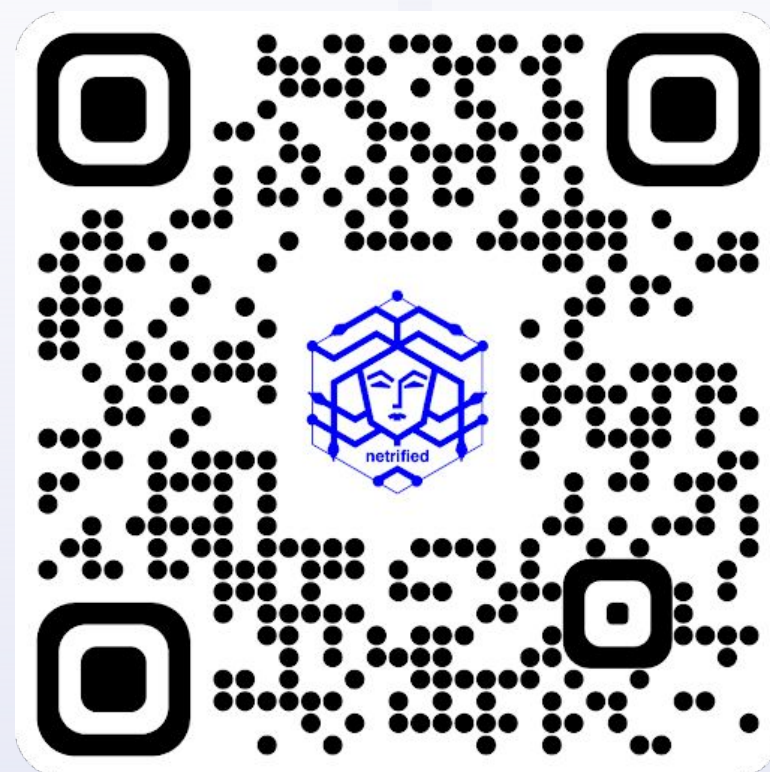
Know of other affected operations? Tell us!



Impact on Network Operators: Cache Servers

- A cache server temporarily stores information on a local network, making browsing faster. Cache servers are usually installed in data centers, ISPs, and peering locations.
- Trade restrictions, export and import controls, and sanctions could impact the availability of these servers. There were two reported cases of Google shutting down its caching servers in two Russian ISPs.
- Google (reportedly) stated that the reason was a change in legal practices and compliance with sanctions. There are reports about Cache servers being unavailable in Afghanistan as well.

Know of other affected operations? Tell us!



Domain Name Registration

- Sudan ccTLD redelegation
- Iran and Syria lack of access to New gTLDs
- .Asia and .NGO
- Reseller Club, a domain name registrar, stopped supporting clients and users from Iran, Sudan, Syria
- The US general licenses explicitly exclude domain name registration services from sanction waivers



Sanctions and Internet Development in the Middle East

We want to hear from you!

Payment systems

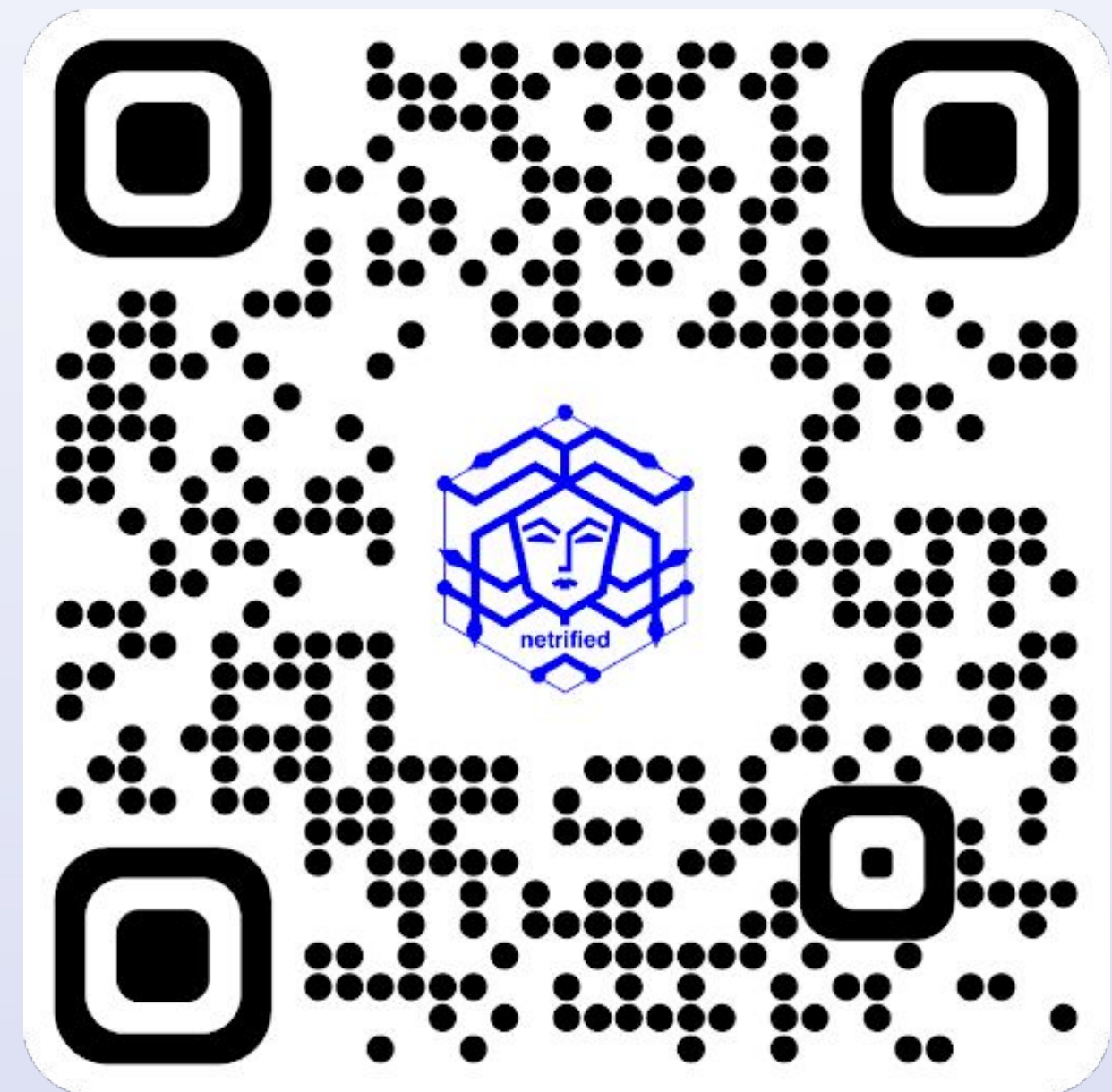
- the global financial system highly interconnected
- Sometimes even having unknown/indirect contacts with the sanctioned countries payment systems can cause problems

Sanction locked countries

- The inability to peer with neighbors
- Makes network operators dependent on more expensive and less efficient peering arrangement

Ambiguity of sanction regimes

- creates risk-averse legal practices and over compliance



Peering exemption for Cuba

In the US, the Office of Foreign Assets Control (OFAC) (the sanction enforcement agency), clarified sanctions don't apply to peering with the Cuban telecommunication operator.

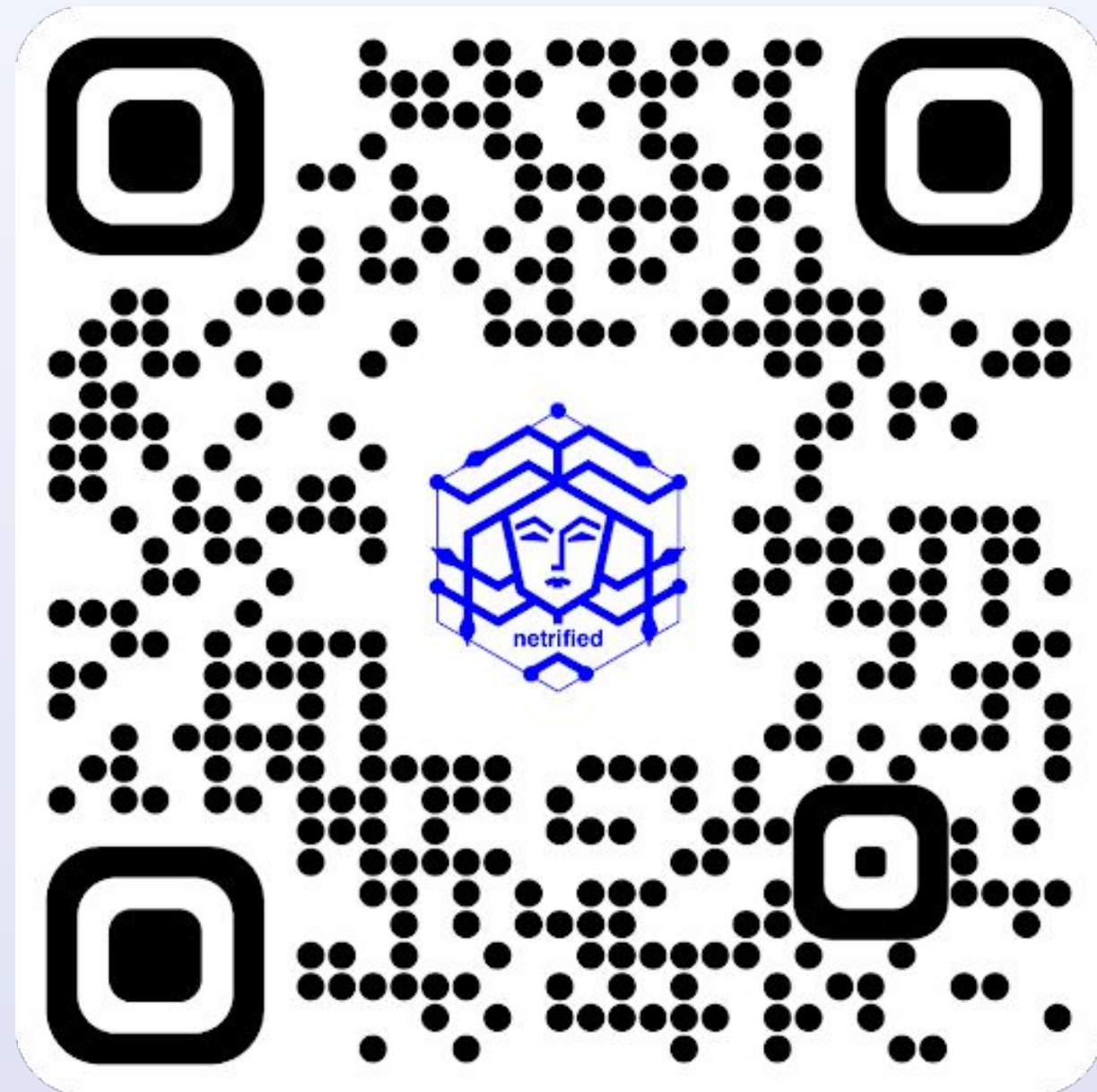


Limited Hope

- 2022, EU “Internet carve-out”
- Limited “to the provision of associated facilities and services necessary for the operation, maintenance and security of such electronic **communication services**, in Russia, in Ukraine, in the Union, between Russia and the Union, and between Ukraine and the Union, and for data centre services in the Union.”
- The Internet carve-out does not apply to sanction regimes applicable to Middle Eastern countries that have been impacted for years.

What's Next?

- Collective action to legally comply with sanctions but also be able to peer in the Middle East
- Report and document instances when sanctions affect fundamental operations necessary for interconnectivity and access to global Internet
- Find appropriate policy venues to discuss how sanctions impact the Internet



Get in Touch

We want to hear from you!

- Experiences
- Additional Issues
- Comments or Concerns

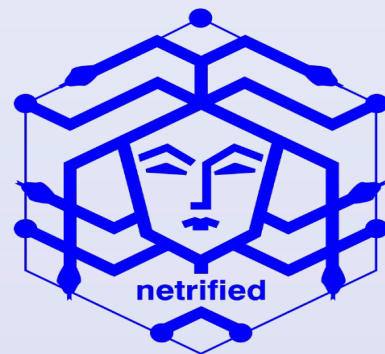
Contact:

farzaneh@digitalmedusa.org

Twitter: @farzanehbad

Website: digitalmedusa.org

Thank You!



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