

PW-03. INTERNET BACKBONE, ISP TIERS AND DC TIERS. EXCURSION TO DC.

1. PURPOSE OF WORK

- 1.1. Get experience of career guidance on DC or ISP.
- 1.2. View of the technology of welding optical cable.
- 1.3. Get initial information about the Backbone level of Internet.

2. TASKS FOR WORK

- 2.1. Visit to a modern data center of ISP.
- 2.2. Study of technical data and designs of Fiber Optic media and connections (dark and light).
- 2.3. View short presentation about RETN Company and about solution on Backbone Internet.
- 2.4. Get initial information about the Backbone level of Internet for Your Region.



3. REPORT

Make a report about this work (**Take a together selfie on Excursion Time and make Screenshot about Backbone of Your Region**) and send it to the teacher's email.

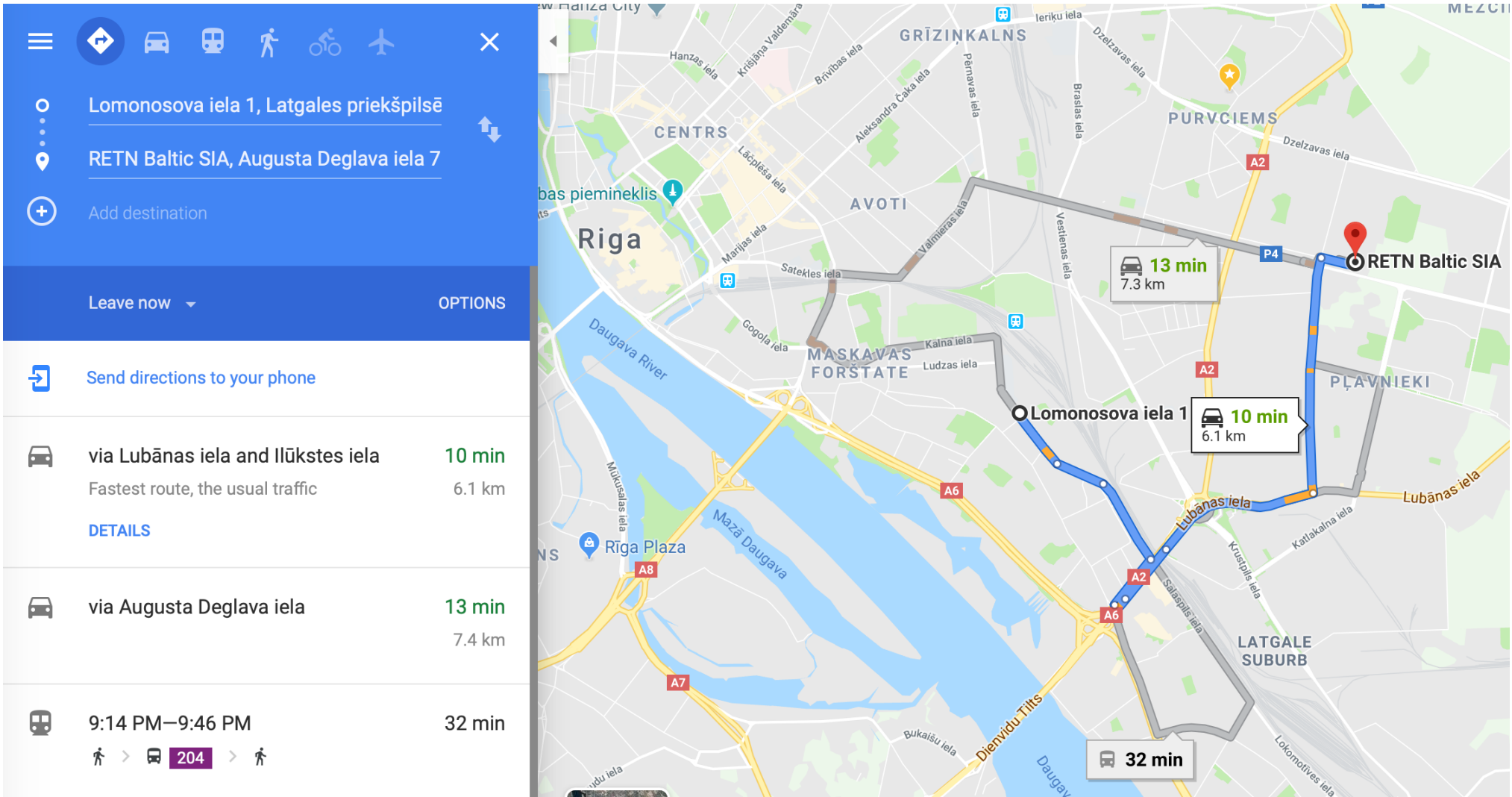
REPORT FOR PW-03: INTERNET BACKBONE, ISP TIERS AND DC TIERS. EXCURSION TO DC.

Student Name Surname	Student ID	Date

PHOTO 1, SCREENSHOT 1, SCREENSHOT 2.

4. GUIDELINES

4.1. ROUTE FROM ISMA TO RETN COMP.



4.2. ABOUT ISP RETN COMPANY ([HTTP://RETN.NET](http://retn.net)).

The screenshot displays the RETN website homepage. At the top, there is a navigation bar with the RETN logo and links for 'About RETN', 'Network', 'Services', 'Support', 'Contacts', and 'Customer Portal'. Below the navigation bar is a large banner featuring a map of the Eurasian network. The map shows various network routes across Europe, Asia, and the Middle East, with labels for 'North Way', 'Central Way', and 'South Way'. A 'Map Key' is provided in the bottom left corner of the map area, showing icons for 'South Way', 'North Way', 'Central Way', and 'RETN P2P'. To the right of the map, there is a large image of the Great Wall of China with the text 'TRANSKZ The RETN Eurasian Way'. Below the banner, there is a text block describing RETN as a leading international network service provider, synthesizing global reach with a local approach. It states that more than 1700 international and local carriers and corporate customers use various RETN network telecommunications services to transmit their data with superior performance from multiple locations worldwide. To the right of this text block, there is a button labeled 'Learn more about RETN' with a circular arrow icon. In the bottom right corner, there is a small logo for 'Общество с ограниченной ответственностью'.

English

market@retn.net +44 20 75176400

Search

RETN

About RETN Network Services Support Contacts Customer Portal

Map Key

- South Way
- North Way
- Central Way
- RETN P2P

[Learn more](#)

TRANSKZ

The RETN Eurasian Way

RETN is a leading international network service provider. Synthesising a global reach with a local approach, our goal is simple: to improve connectivity between our clients and the largest telecommunications nodes worldwide.

More than 1700 international and local carriers and corporate customers use various RETN network telecommunications services to transmit their data with superior performance from multiple locations worldwide.

[Learn more about RETN](#)

KEY FACTS ABOUT RETN



52 000 km of lit fibre



3 continents, 37 countries connected



1200+ clients



250+ on-net PoPs



200+ Dedicated, Passionate Staff



10 Tbps of traffic on European Ring

RETN Baltic SIA

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Tel.: +371 67150000

Email: market@retn.net

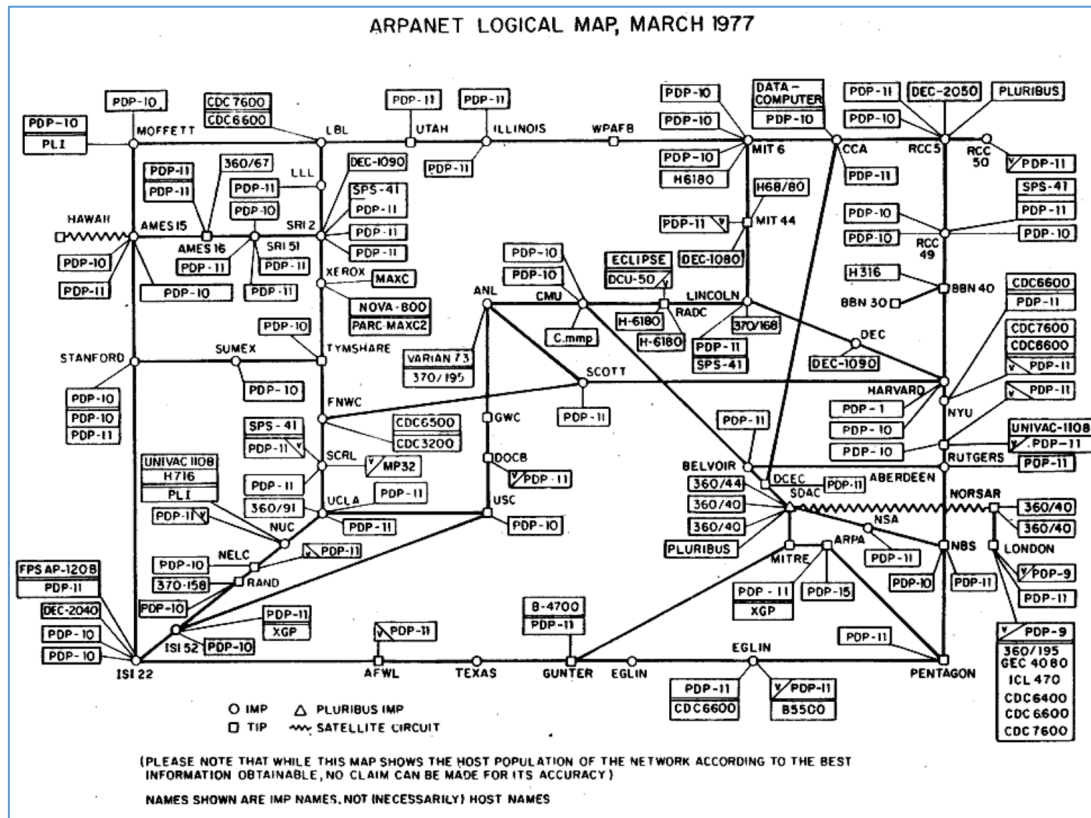


4.3. ABOUT BACKBONE OF INTERNET.

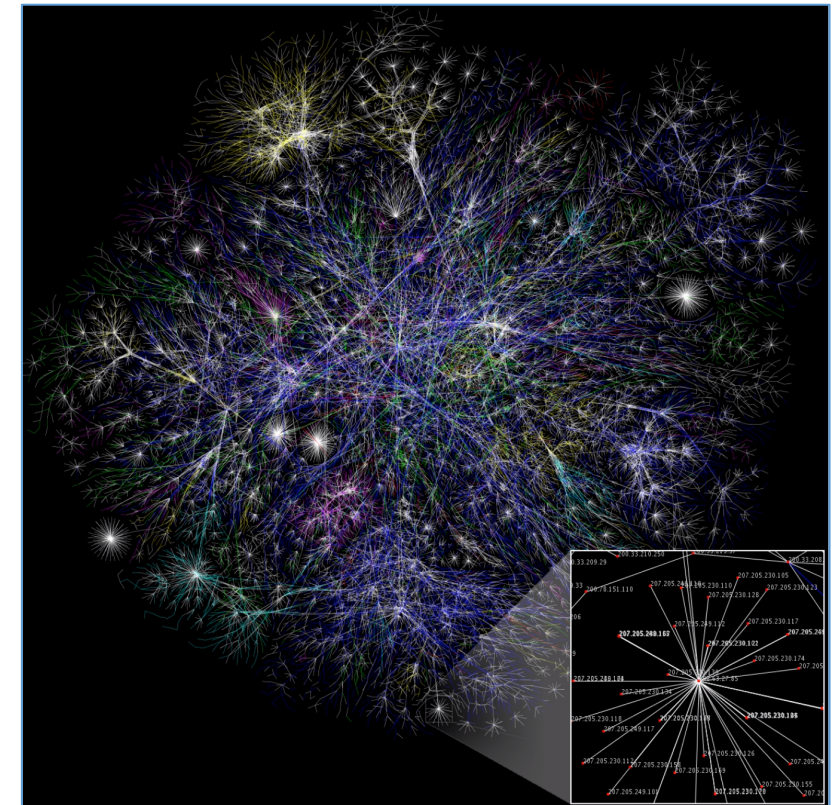
4.3.1. Internet and Backbone levels.

Read key information about the Internet and about the Backbone levels (Tier-1, Tier-2) of Internet.

- a) <https://www.itgsnews.com/mapping-internet-maps/>
- b) https://en.wikipedia.org/wiki/Tier_1_network



Pic. 1. [First Internet Backbone – ARPANET.](#)

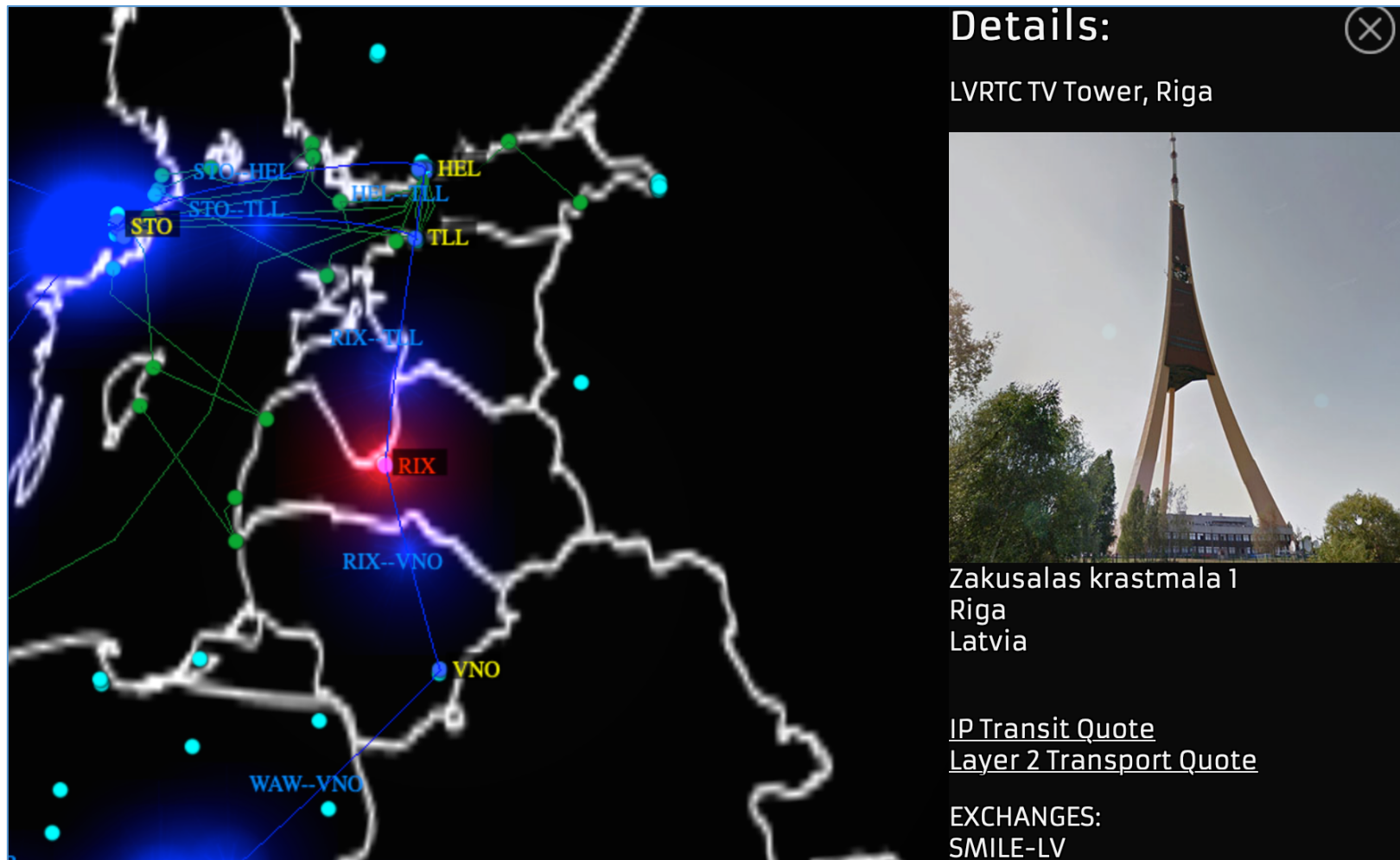


Pic. 2. [This Day Internet – many Tiers on Backbone](#)

4.3.2. Backbone level of Internet.

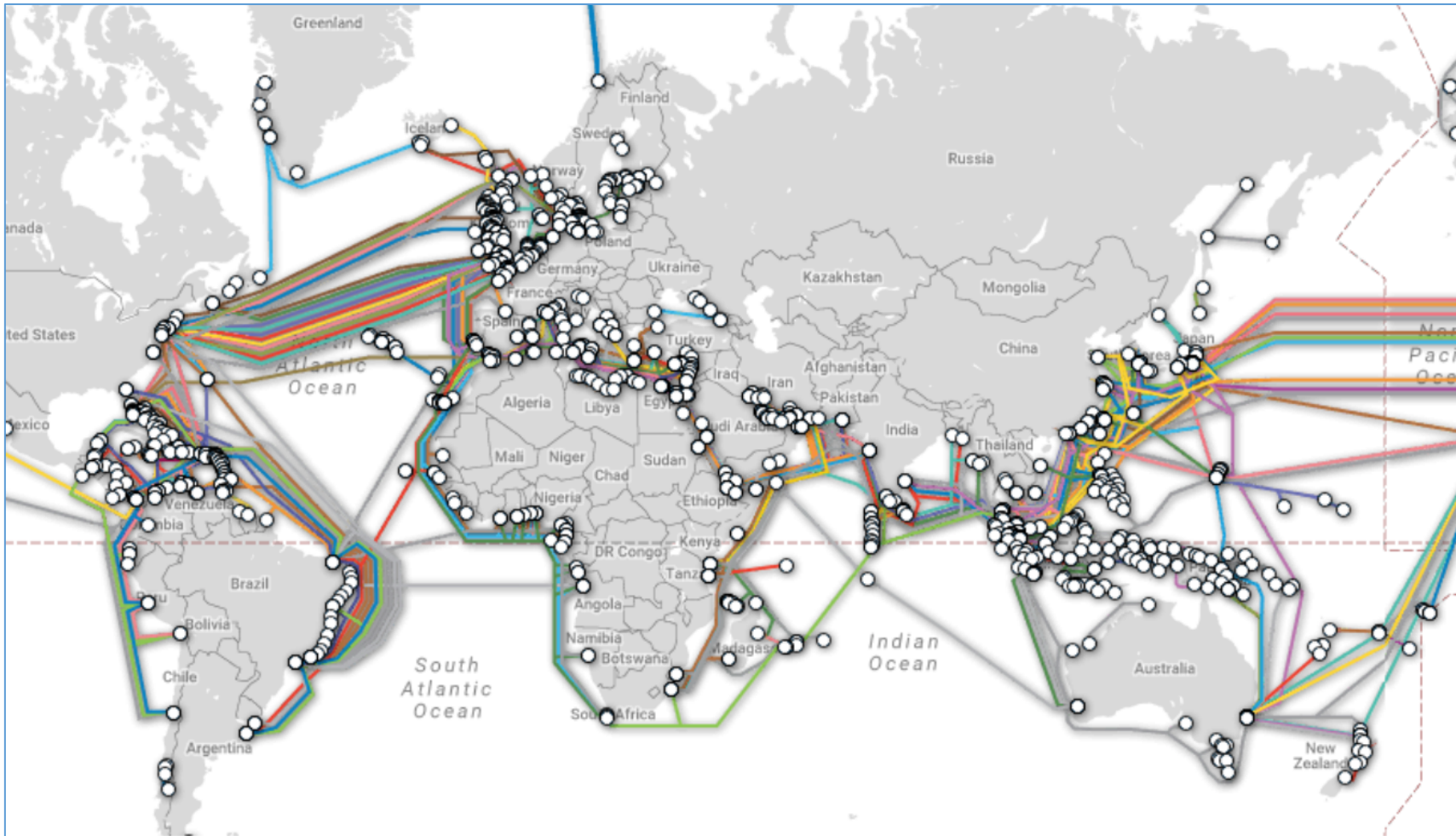
Read key information on site <http://he.net/3d-map/> about the Backbone level of Internet for Your Region (or Your Country, or Your City or Your Capital City) and **make Screenshots 1**.

(Also look the Tools on this resource <https://bgp.he.net/>)



4.3.3. Submarine Channels of Internet.

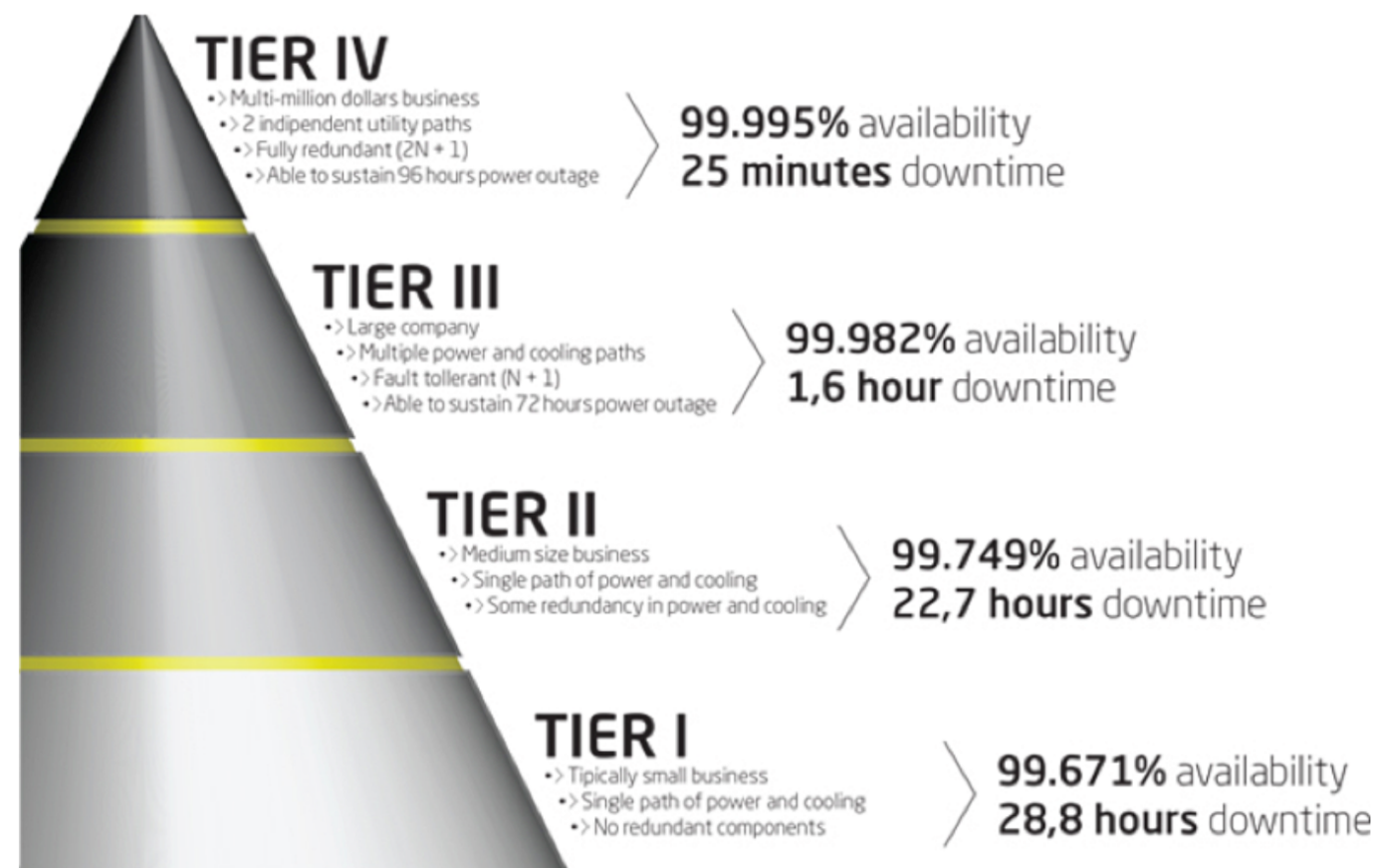
Read key information on site <https://www.submarinecablemap.com> about the Submarine Channels of Internet for Your Region (or Your Country, or Your City or Your Capital City) and **make Screenshots 2**.



4.3.4. Data Center Certification, Standards and Compliance.

Read information about Data Center certification, standards and compliance ensure operational safety and continuity on site
<https://managementmania.com/en/data-center-certification-standards-and-compliance>.

Data Center Tier Rating Breakdown: Tier 1, 2, 3, 4



Related terms and methods:

- Availability
- Cloud Computing
- Data Centre
- Private cloud
- Server Room
- GDPR (General Data Protection Regulation)

Related standards:

- AICPA SOC Reports
- ANSI-TIA-EIA 942
- EN 50600
- HIPAA Certification
- ISO 27000
- NIST 800-53
- PCI DSS Certification