Global Sea Routes

A Historical Geodatabase of European Global Navigation (1500-1900)

"The temporal dimension of world connectedness, or: how long did it take to travel by sea to several overseas destinations and how did that change over the four centuries of the modern era?"

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GSR - Global Sea Routes is a **relational geospatial database** aimed at the study of **European navigation on a global scale** in the modern and contemporary ages, in order to understand how the degree of world **interconnectedness** from the standpoint of maritime journey times evolved over four centuries (1500-1900).

Project launch: January 2019
Prototype development and fine-tuning: late 2020-1st trimester 2021
Web interface implementation: from second trimester 2021

Software used for the prototype database: PostgreSQL, PgAdmin, PostGIS, QGIS
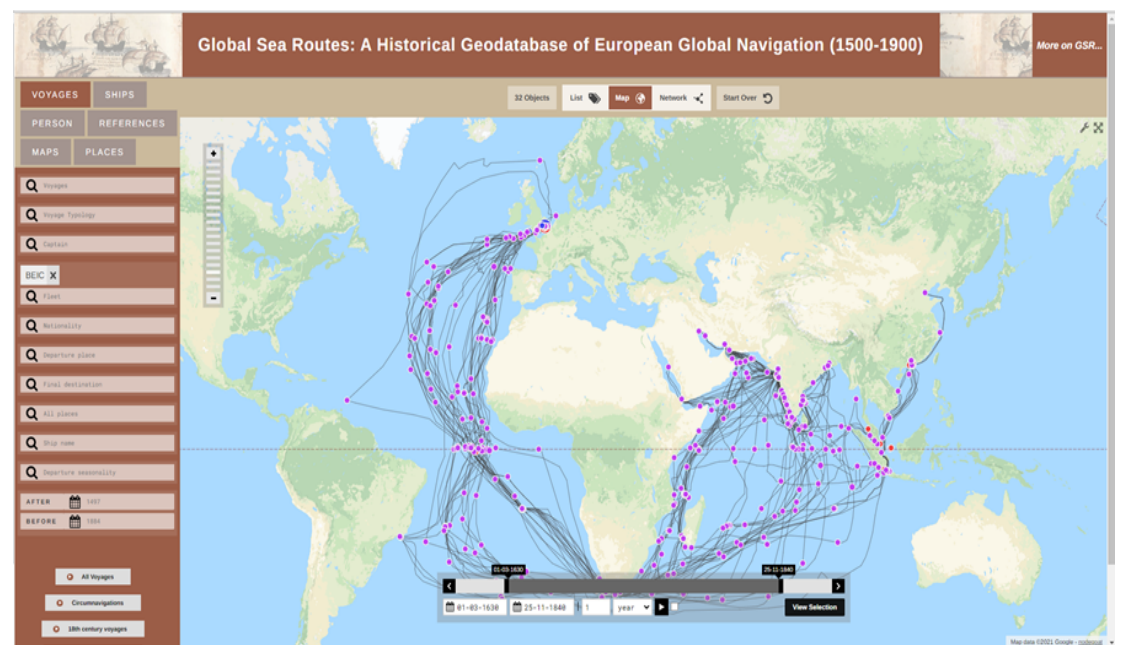**Online database and data visualization:** Nodegoat

GSR is
- a **relational database** with a **spatial** component (Geodatabase)
- a **scientific cooperation** between the University of Trieste and the Italian Navy Hydrographic Institute

Ongoing developments
- debug of the database structure
- data entry
- web application

Web application
- enables final users to obtain **comparative synoptic visualisations**, e.g. **dynamic maps** and comparative quantitative **tabulations,** designing routes according to specific research interests and needs
- **search** options based on series of **variables**, such as:
- time **periods**
- geographical **areas** and **relations**
- vessels **nationality** and **purpose** of the voyages
- **technical characteristics** of vessels and propulsion systems
- **navigation techniques**, relating to nautical, astronomical and cartographical **knowledge** and skills

GSR objectives: computing plotting narrating

- analysing quantitatively and plotting on georeferenced digital maps **maritime connections** fostered by European navigation
- making use of **printed sea voyage accounts** and manuscripts **ship logbooks** to construct digital cartographies and produce narratives from non-narrative data
- understanding **globalisation** as a function of European overseas expansion and the connected voyages, explorations and transportations in order to visually represent **global Europeanness** from the late-15th century to the beginning of the 20th century
- building relational **online geodatabase** to be accessed on the Web

Screenshot of synoptic geo-referenced visualization in GSR web interface

Funding and awards (2018-2021)