



European Strategy Forum
on Research Infrastructures

ESFRI Lifecycle Approach

Exchange of experience workshop

Effective use of Horizon Europe preparatory phase and individual support funding

15th November 2021

Jan Hrušák



ESFRI Roadmap 2021

Prepared on the request of the COMPET

To be presented COMPET on 26 Nov. 2021 and made public at
ESFRI Forum on 7 December 2021

ROADMAP 2021
**STRATEGY
REPORT
ON RESEARCH
INFRASTRUCTURES**

Content

1. **ESFRI Strategy Report**
2. **Analysis of RIs landscape in Europe and globally (+ strategic dimension)**
3. **List of pan-European RI Projects and of operational RIs (ESFRI Landmarks)**

List of new pan-European RI Projects

	ACRONYM	TITLE	POLITICAL SUPPORT
DIGIT	EBRAINS	European Brain ReseArch INfrastructureS	FR , BG, EL, IT, NL, NO, ES, SE, CH, DK
	SLICES	Scientific Large-scale Infrastructure for Computing/Communication Experimental Studies	FR , CY, FI, EL, IT, LU, NL, ES, CH, PL
	SoBigData++ RI	European Integrated Infrastructure for Social Mining and Big Data Analytics	IT , EE, CH
ENE	MARINERG-I	Offshore Renewable Energy Research Infrastructure	IE , ES, PT, BE, UK
H & F	EIRENE RI	RIs for EnvIRonmental Exposure assessment in Europe	CZ , AT, NL, SK, EL, IT, IS, DE
PSE	ET	Einstein Telescope	IT , ES, NL, BE, PL
	EuPRAXIA	European Plasma Research Accelerator with Excellence in Applications	IT , PT, HU, CZ, UK
SCI	GGP	The Generations and Gender Programme	NL , HR, EE, DE, HU, ES, SE, PL, AT
	GUIDE	Growing Up in Digital Europe-EuroCohort	IE , HR, EE, LV, PT, ES, HU, UK
	OPERAS	Open Access in the European Research Area through Scholarly Communication	FR , HR, IT, PT, DE, EL, NL, PL, UK
	RESILIENCE	Religious Studies Infrastructure: Tools, Innovation, Experts, Connections and Centers	IT , IL, BA, BG, NL, AL, EL



ESFRI Roadmap 2021

List of operational RIs (Landmarks)

	ACRONYM	TITLE	POLITICAL SUPPORT
Health & food	AnaEE	Infrastructure for Analysis and Experimentation on Ecosystems	FR, BE, CZ, DK, FI
	MIRRI	Microbial Resource Research Infrastructure	PT, ES, BE, EL, FR, LV, NL, RU, RO
ENVIR.	ACTRIS	Aerosol, Cloud and Trace gases Research Infrastructure	FI, AT, BE, BG, CY, CZ, FR, EL, IT, NL, NO, PL, RO, ES, CH
ENERGY	EU-SOLARIS	European Solar Research Infrastructure for Concentrated Solar Power	ES, CY, DE, EL, FR, TR, PT

ESFRI (Roadmapping) concept evolution

2002 → 2006 → 2008 → 2010 → 2016 → 2018 → 2021



Hans Chang

**ESFRI Concept
ESFRI Creation**
established with
a mandate from
the Council of
the EU



John Wood

1st ROADMAP for
the construction
and development
of the next
generation of
pan-European RIs



Carlo Rizzuto

1st UPDATE
Increasing the
number of RIs
of pan-
European
relevance



**Beatrix
Vierkorn-Rudolph**

2nd UPDATE
focusing on
Energy, Food and
Biology



John Womersley

Update process
identified
projects expected
to move to
**implementation
(LM)** in <10 years
from their first
inclusion on the
Roadmap.



Giorgio Rossi

**Consolidation
& incorporation**
of the mandates
of Council:
sustainability,
innovation, and
hub of funders
of e-infra

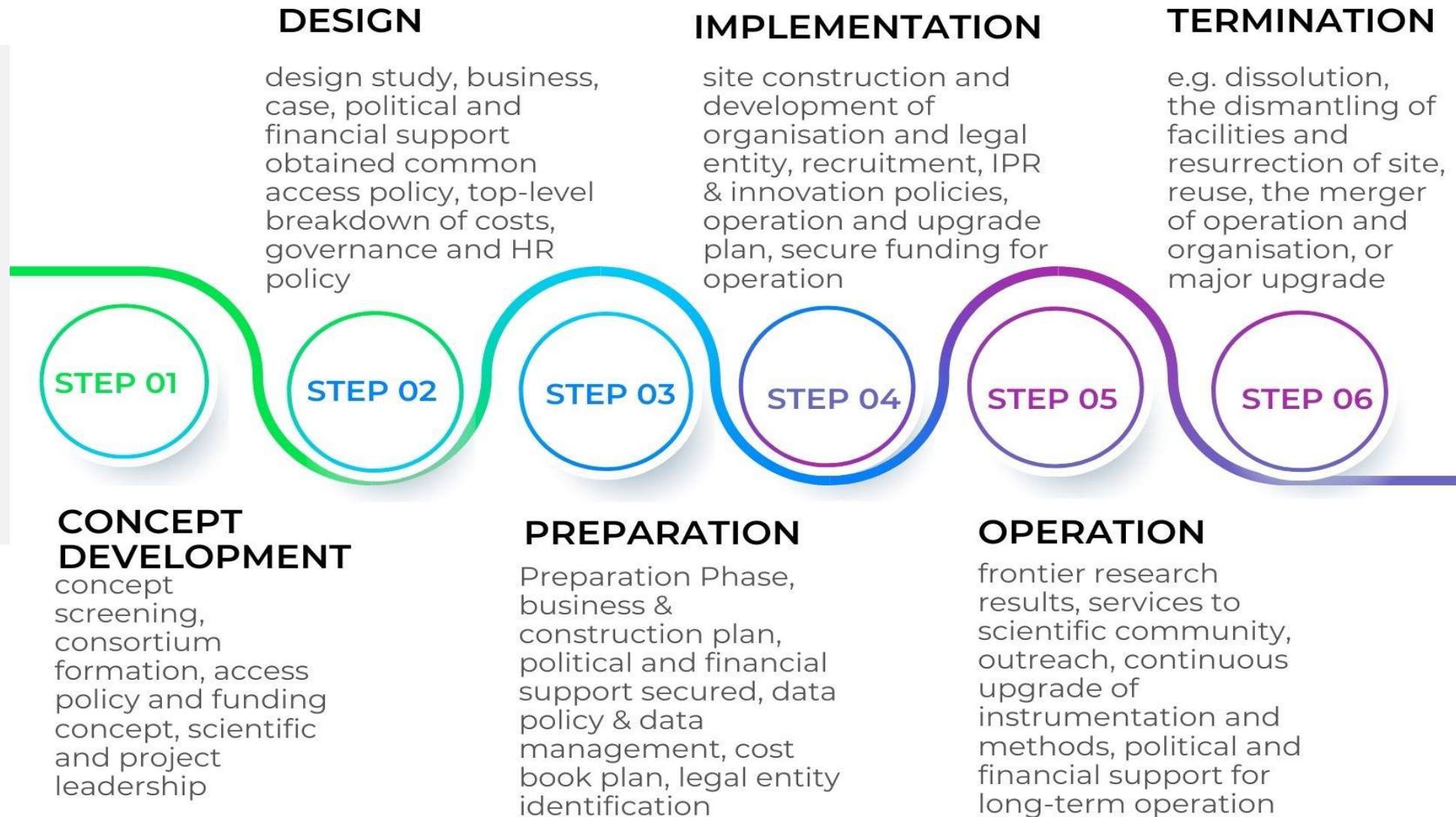


Jan Hrušák

**Integration
& relevance**
**strategic
positioning**
in ERA;
paradigm
shift from
planning to
operation

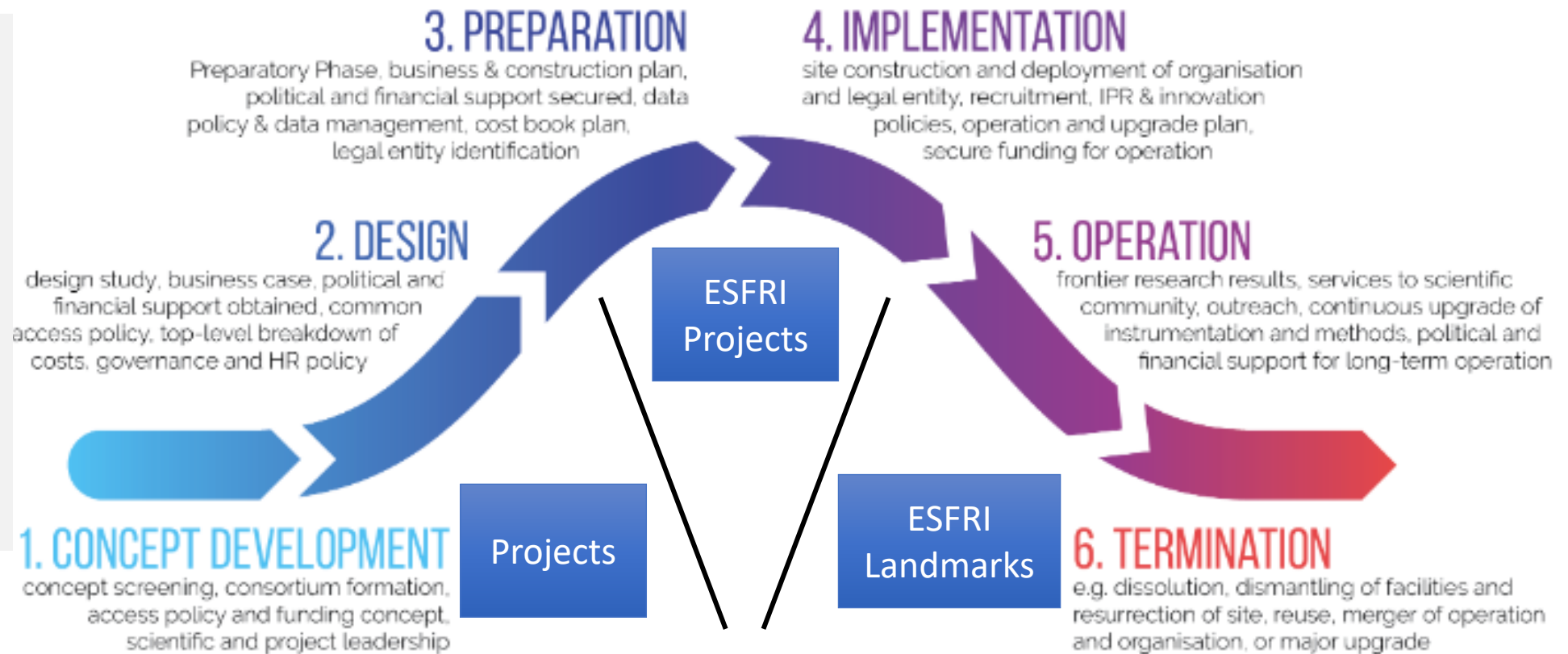
Lifecycle approach of RIs

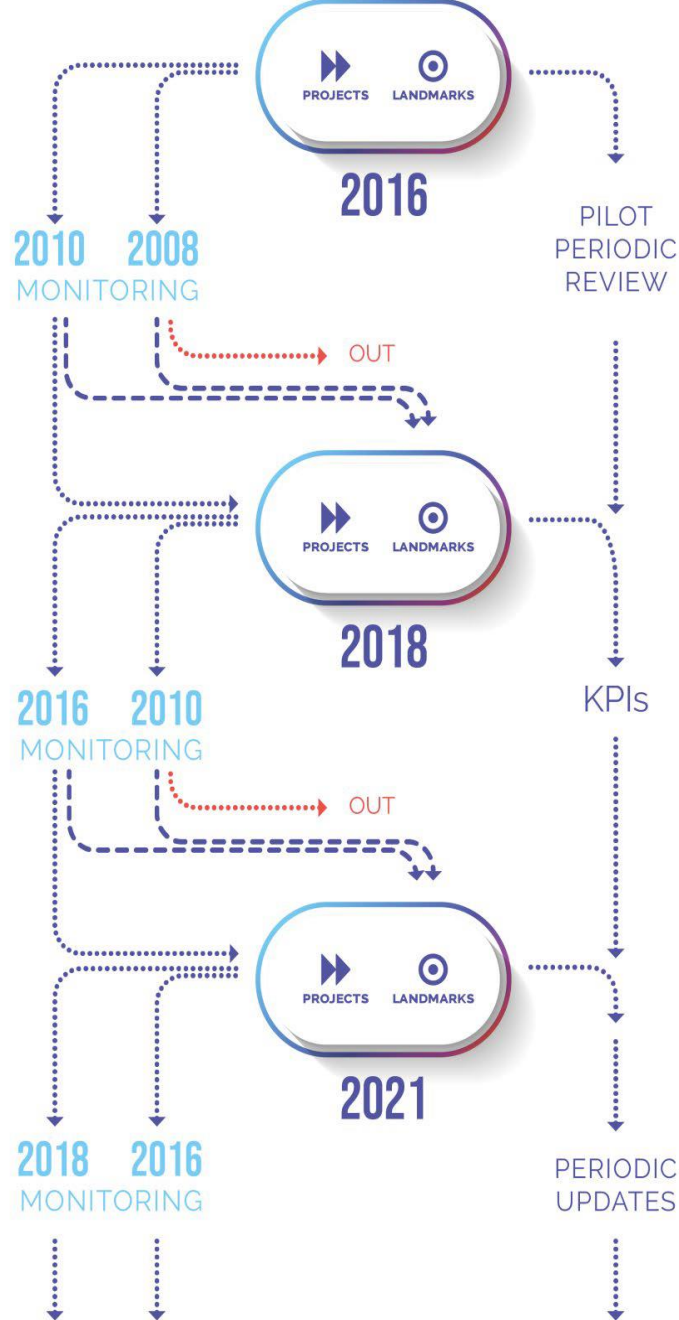
The evolution in time of **ESFRI Projects** and **ESFRI Landmarks** and the needs and targets of the RI implementation are understood as a sequence of phases from the **CONCEPT** to **OPERATION** and to **TERMINATION**



Lifecycle approach of RIs

The evolution in time of **ESFRI Projects** and **ESFRI Landmarks** and the needs and targets of the RI implementation are understood as a sequence of phases from the **CONCEPT** to **OPERATION** and to **TERMINATION**





ESFRI Roadmap Dynamics

Assessment of new & monitoring of ESFRI projects

SPECIFIC GOALS: to check the overall progress towards implementation according to the fulfilment of minimal key requirements

Monitoring of ESFRI projects 2010

- to verify the achievement of the implementation phase as expected by the end of their ten years in the Roadmap
- questionnaires addressing the projects 2010, followed by hearing sessions
- the Forum award the status of ESFRI Landmark

Monitoring of ESFRI projects 2016

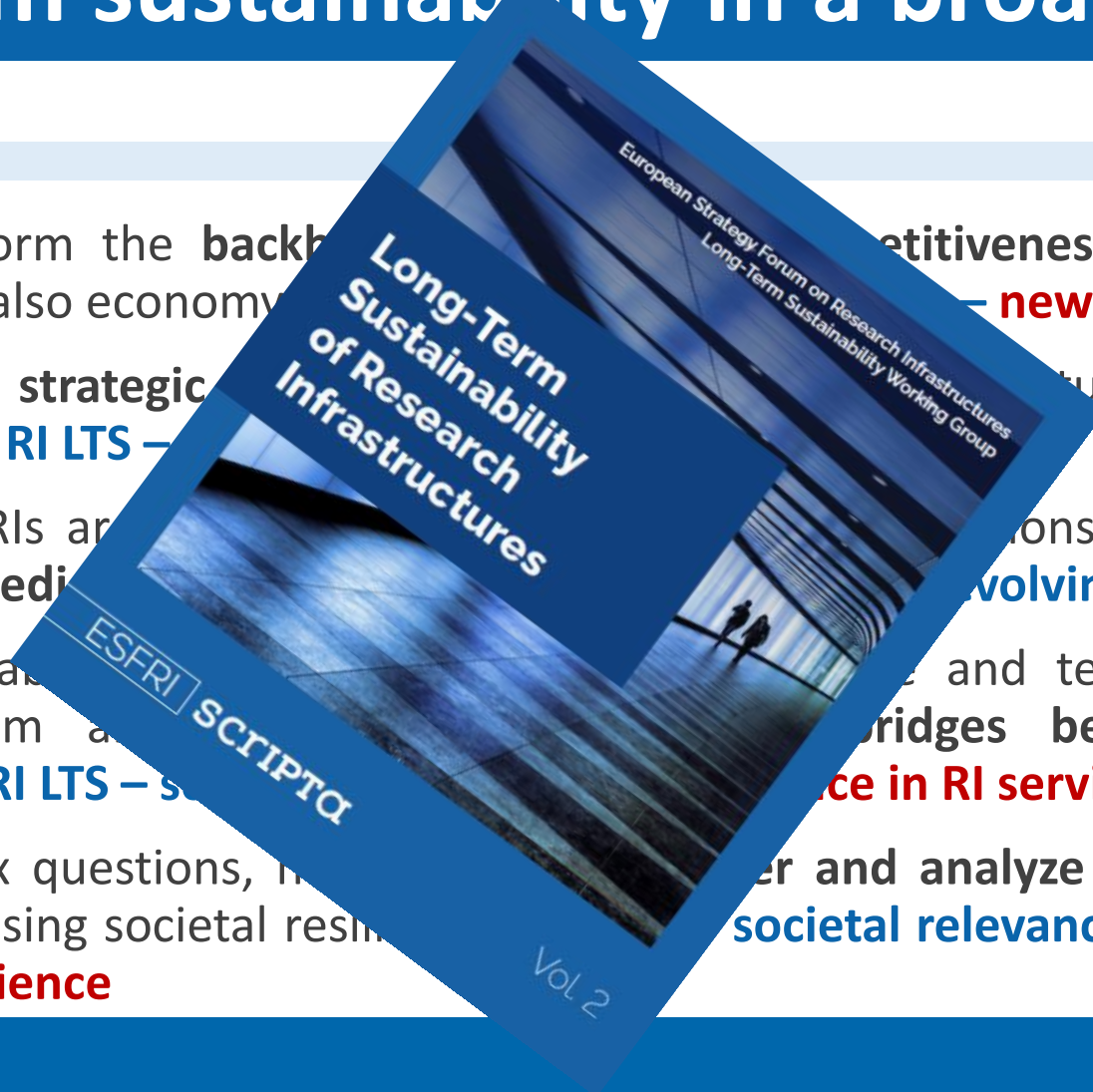
- questionnaires addressing generic and specific aspects of the scientific case and progress towards implementation => it shows the most common bottlenecks concerning legal and financial issues encountered by the projects

Periodic review of ESFRI Landmarks (experience on RIs using the KPIs)

MoS+ (The monitoring system for new proposals and the existing ESFRI projects)

RI long term sustainability in a broader EU context

- European RIs form the backbone of competitiveness in science and innovation, but also economy – **new ERA concept**
- ESFRI develops strategic research infrastructures in European Research Area > **RI LTS –**
- The needs for RIs are growing due to challenges in digitalization, environment, medicine – **involving issues – EOSC**
- Efficient RIs enable researchers from different research communities > **RI LTS –** **bridges between research communities –** **increase in RI services**
- Answer complex questions, process and analyze large amount of data thus increasing societal resilience – **societal relevance – RI ecosystem for societal resilience**



RI long term sustainability in a broader EU context

- European RIs form the **backbone of European competitiveness** in science and innovation, but also economy > **RI LTS – European relevance – new ERA concept**
- ESFRI develops **strategic orientations** for research infrastructures in European Research Area > **RI LTS – ESFRI concern – new ERA governance**
- The needs for RIs are increasing rapidly with complex questions in **digitalization, environment, medical research or social sciences** > **RI LTS – evolving issues – EOSC**
- Efficient RIs enable the greatest discoveries in science and technology, attract researchers from around the world and **build bridges between research communities** > **RI LTS – scientific excellence – excellence in RI services**
- Answer complex questions, need to **store, transfer and analyze large amount of data** thus increasing societal resilience > **RI LTS – societal relevance – integrated and interlinked RI ecosystem for societal resilience**





European Strategy Forum
on Research Infrastructures

Thank you

Jan Hrušák