



Construction of a RI based on IKC – ESS ERIC

In-kind Contributions in the life of an ERIC

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European Spallation Source ERIC

Garching, 5th December 2019





Status of the ESS Project

Construction, towards Operations & First Science



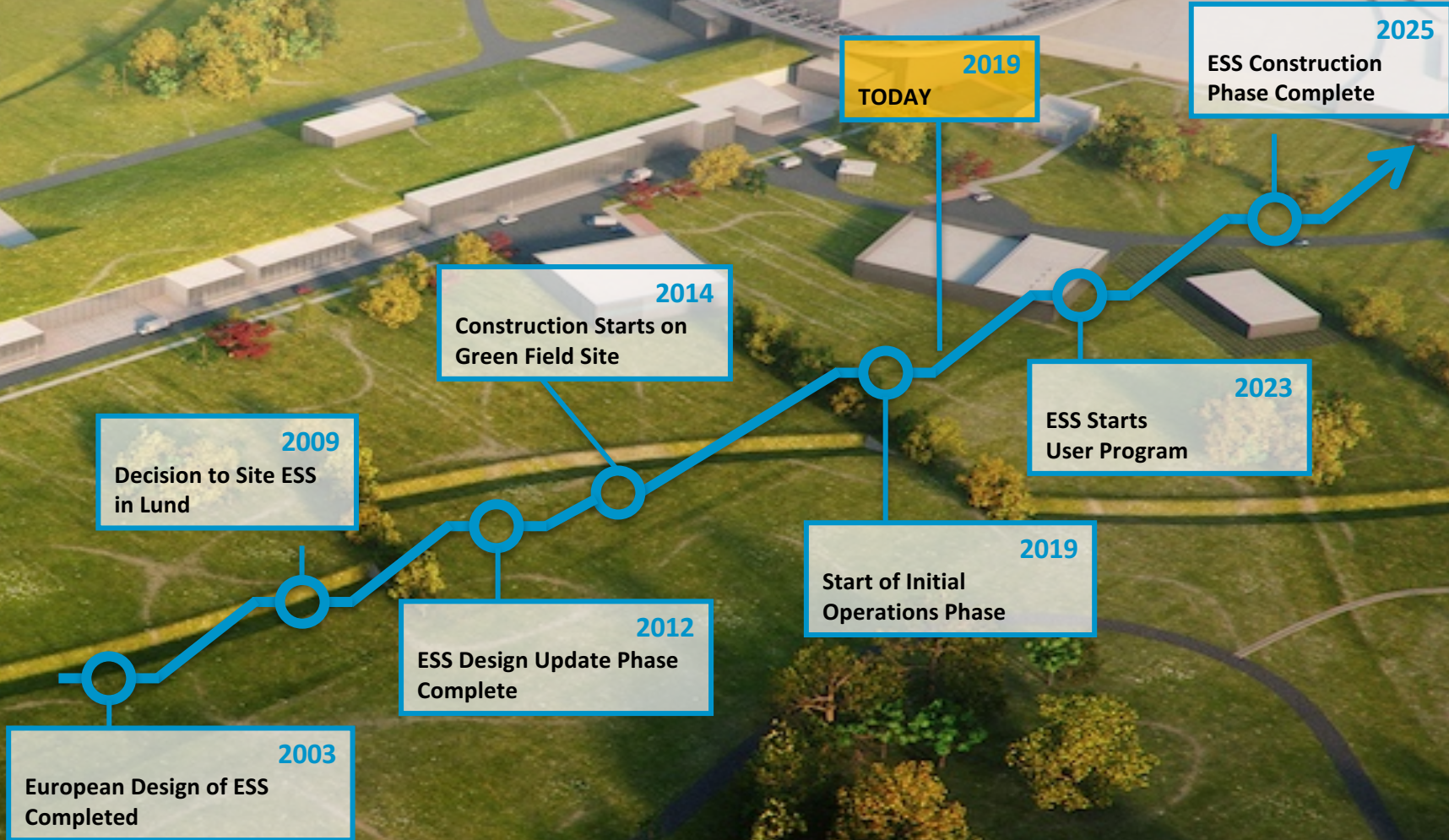
ACCELERATE has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N. 731112



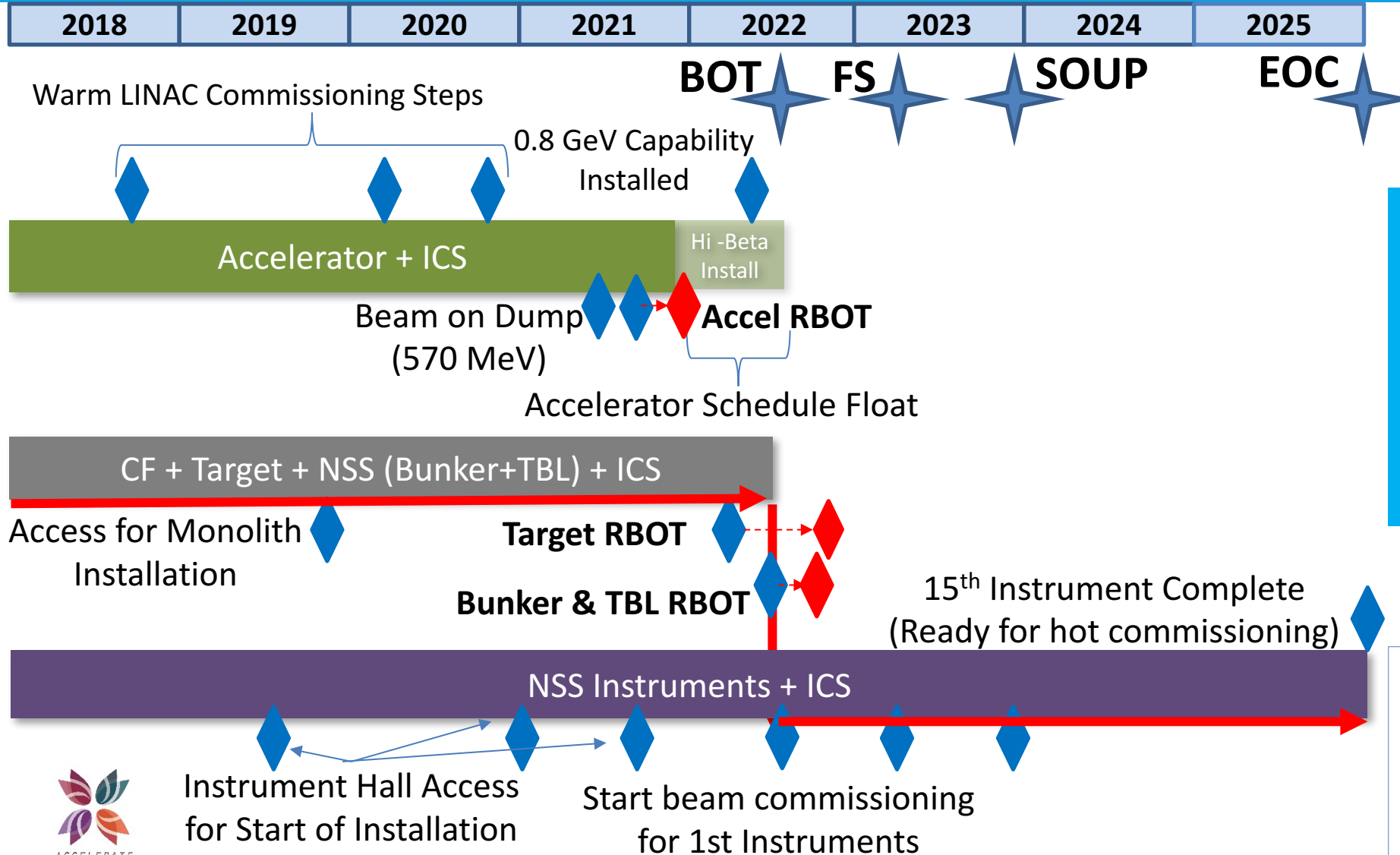
ESS is a “true” green-field Project



Construction project is 62% complete



A reminder of the ESS Critical Path



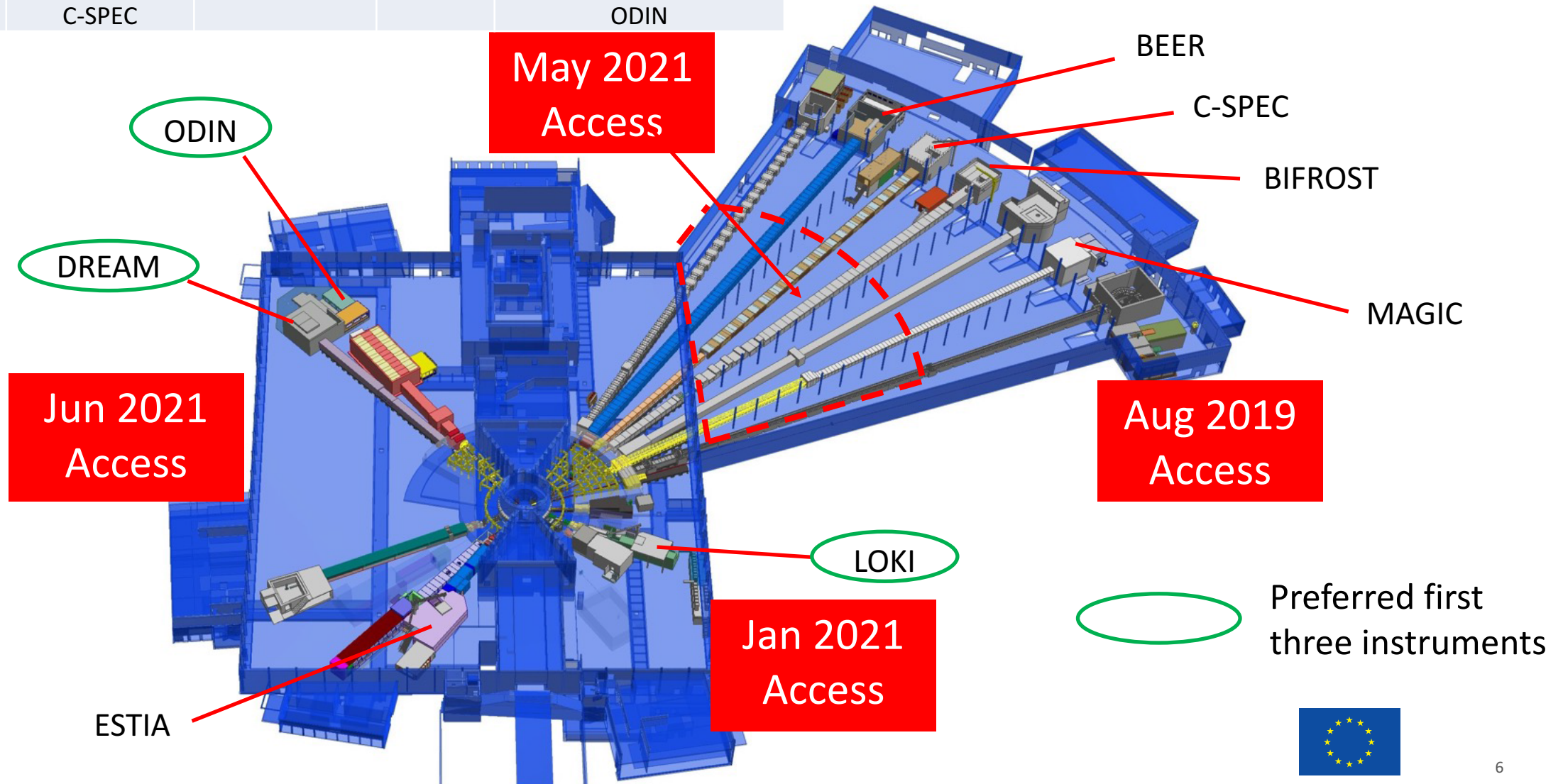
ESS is focused on delivering First Science with three instruments by the end of 2023

Schedule date (no float) is March 2023

BOT - Beam on Target
 RBOT - Ready for Beam on Target
 FS - First Science
 SOUP - Start of User Programme
 EOC - End of Construction project

First eight instruments planned to be ready for commissioning by end of 2022

<u>Diffractometers</u>	<u>Spectrometers</u>	<u>Reflectometers</u>	<u>SANS</u>	<u>Engineering & Imaging</u>
DREAM	BIFROST	ESTIA	LOKI	BEER
MAGIC	C-SPEC			ODIN



Origins (and future) of IK @ ESS

Short History of IKC @ ESS - 1

- In-Kind Review Committee established by the ESS Governance to oversee the execution of the IK processes
 - First preliminary meeting in November 2012 where Chair and Vice-Chair were appointed
 - Work packages for pre- construction endorsed
- Cost Book for construction drafted in 2013
 - Work Packages values assigned in 2013 euros

Short History of IKC @ ESS - 2

- By beginning 2015 the majority of work packages, except for instruments, had a Partner identified
- ESS transformed in 2015 to a European Research Infrastructure Consortium (ERIC)
 - In-Kind process formally detailed in Annex 3 of the ESS ERIC Statute
- “Heads of Agreements” initially signed with the Partners
- Templates for the In-Kind Contribution Agreement (IKCA) and Schedule/Technical Annex (TA) approved in 2015

Short History of IKC @ ESS - 3

- First TAs endorsed in November 2015 during the meeting #7 of the In-Kind Review Committee (IKRC)
- Between 2015 and 2019 almost all the In-Kind scope for Accelerator, Target and Integrated Control Systems covered by signed Technical Agreements
- Almost all In-Kind Contribution Agreements signed and endorsed
 - First Three significant Contracts still to be finalized
- In-Kind in (Initial) Operation now being considered

In-Kind in Operations

Principles presented to and approved by Council#15 – 19/02/2019



European Spallation Source ERIC
Council/13/16.c
4-5 June 2018

Principle of In-Kind Contributions and Definition of “Use” for Initial Operations and Steady-State Operations

In-Kind in Operations

Principles presented to and approved by Council#15 – 19/02/2019

3.1 Principles for Contributions In Kind During Operations

The following principles come from the final version of the OWG Report from May 2017:

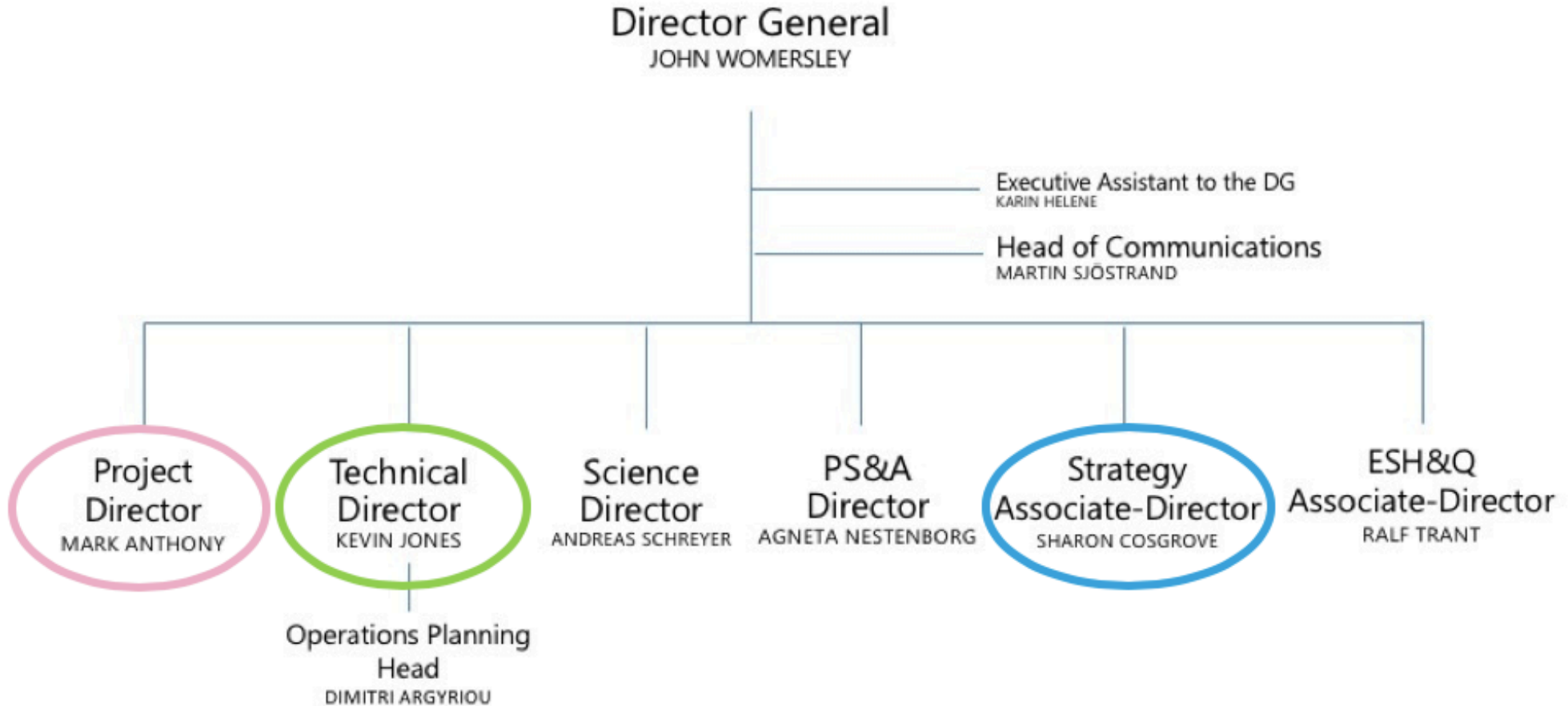
“ESS is open to the concept of in-kind contributions to operations. In-kind contributions may be in the form of equipment or seconded staff. However, the fraction of operations that can be covered this way will be significantly less than was the case for the construction phase. [OWG estimated in May 2017] that in the steady state up to of order 10% of ESS operations costs could be relatively straightforwardly handled through in-kind contributions.

In-Kind Contributions

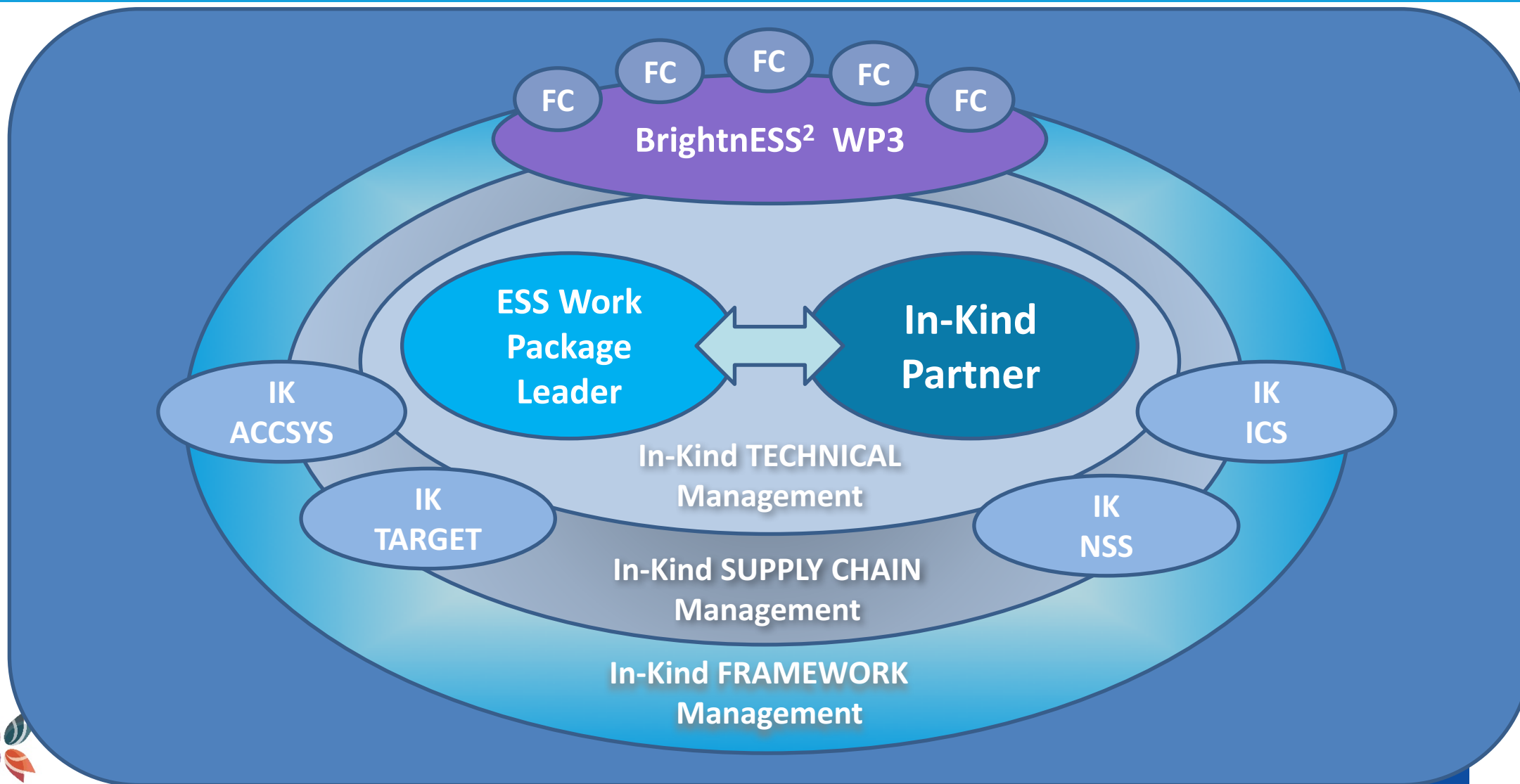
As with the construction phase, all non-cash contributions to ESS will go through an in-kind process in the same way that they currently do for the construction phase. Briefly, the proposed approach is that ESS

The IK Environment @ ESS

Top Management Structure @ ESS



ESS In-Kind System

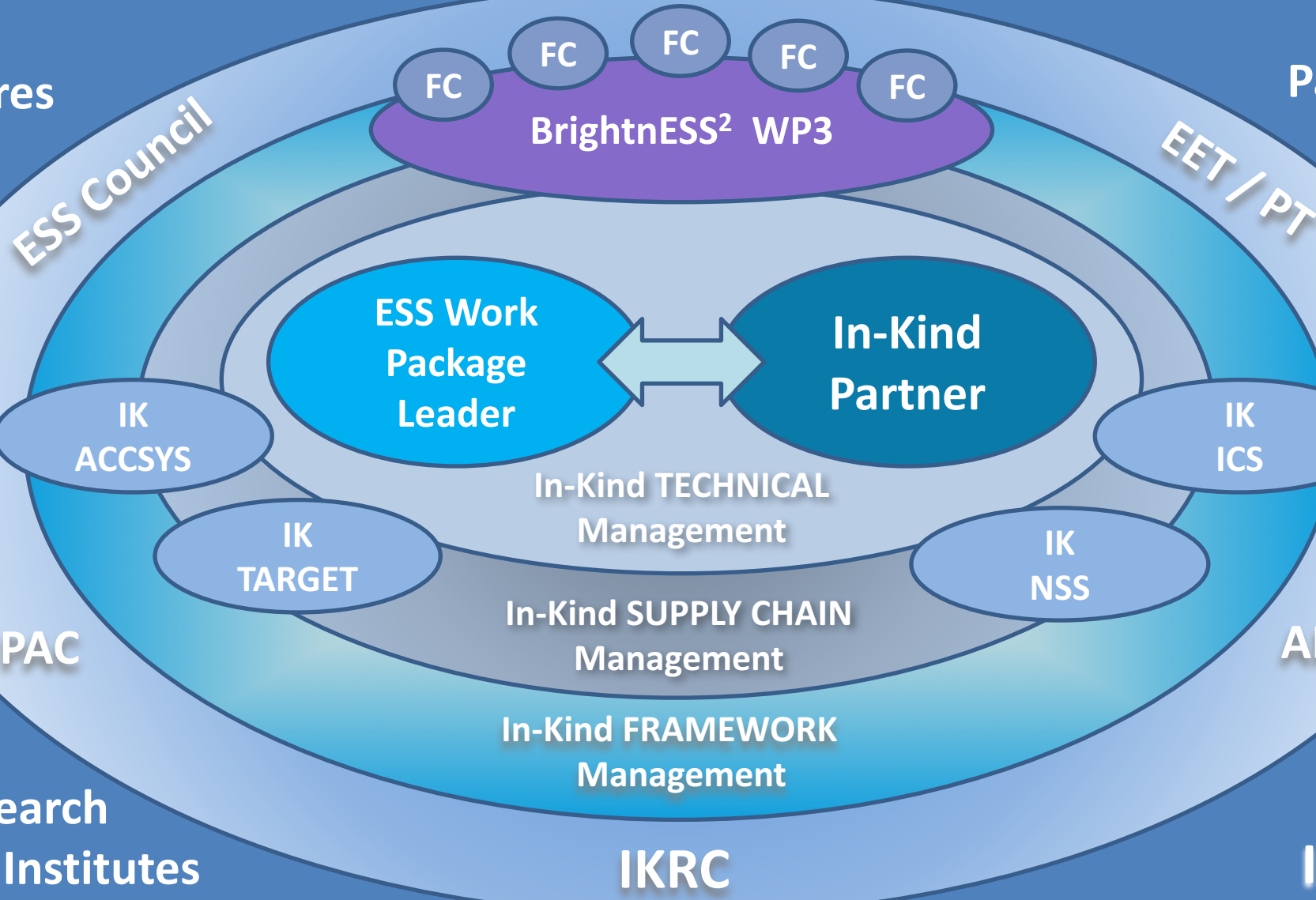


ESS In-Kind System – The Stakeholders

Research
Infrastructures
Universities

Partner States

Funding Agencies



National and
European Research
Centres and Institutes

In-Kind
Partner
Institutions

Industry



In-Kind Contributions @ ESS

Results, Facts & Figures



IK Status

Key Points

To date

- 242 M€ (85 TAs) approved by Council (including 19 accredited).
- 178 M € (53 TAs) endorsed by IKRC.
- Almost all IK for Accelerator, ICS and Target is approved by Council or endorsed by IKRC.

Ongoing

- 126 M€ to be agreed for NSS – mostly Instruments (Sample Environment + Neutron Technologies)
- Agree 3 remaining IKCAs; STFC (UK), ESS Bilbao (ES) and CNR (IT).
- Following 15th Council approval of IK Principles, next step is to establish Procedures for IK Contributions during Operations

End of ESS Construction

- 550 M€ estimated IK.
- Additional c.28 M€ in collaborations (SE/DK) and c.13 M€ in direct contracts placed with German Institutes.

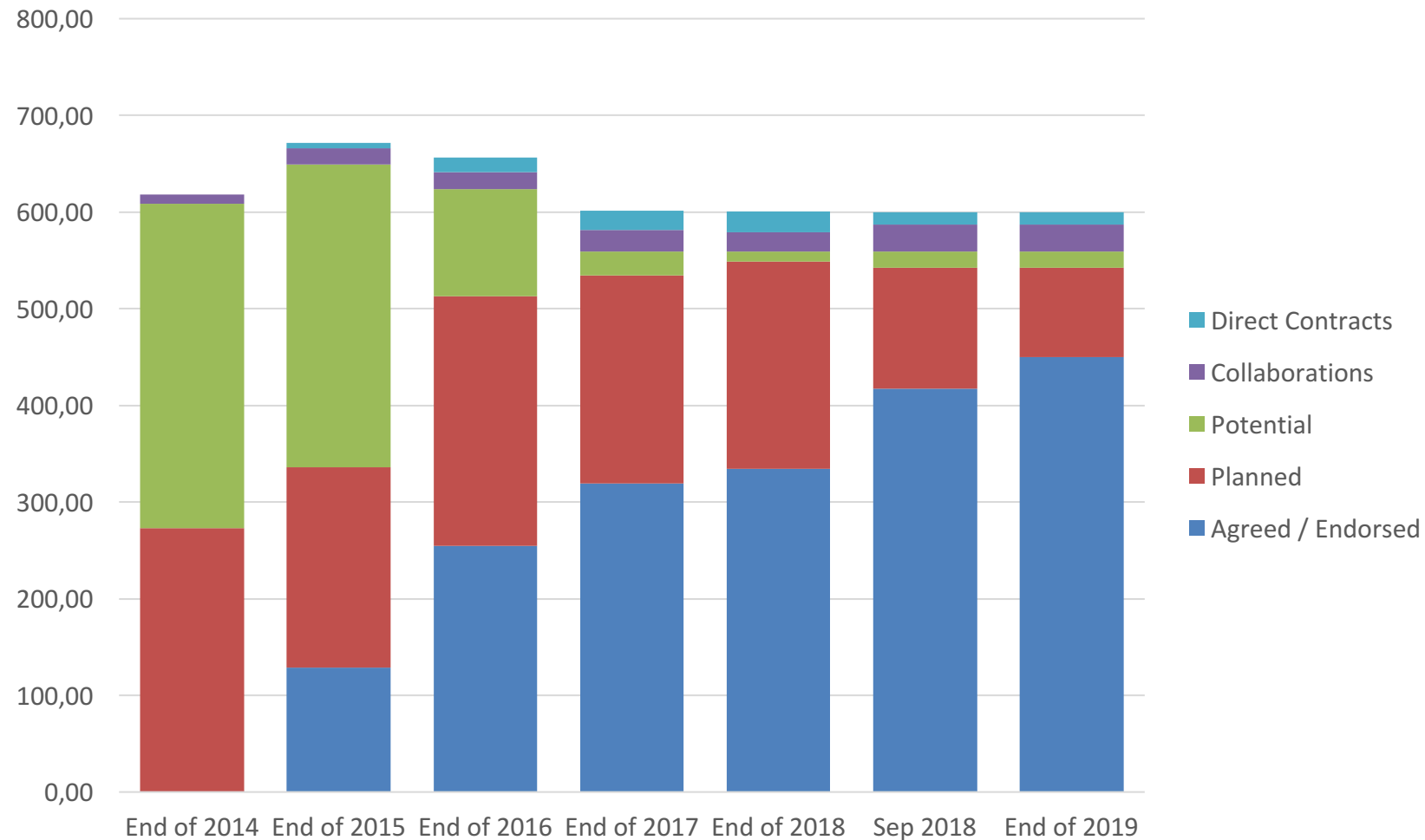
IK Status

Status of Agreements

		TA completed & accredited by Council	TA approved by Council	TA endorsed by IKRC	CA - Host countries Collaboration Agreements	DC (Direct Contract)	TOTAL
Accelerator	<i>No #</i>	4	26	8	12		50
	<i>Value</i>	655	186,267	67,705	20,140		274,767
Target	<i>No #</i>		4	7	1	4	16
	<i>Value</i>		18,278	42,747	204	10,053	71,282
NSS	<i>No #</i>	12	22	36	6	11	87
	<i>Value</i>	1,756	20,810	66,598	1,035	3,210	93,409
ICS	<i>No #</i>	3	14	2	1		20
	<i>Value</i>	515	13,877	1,148	425		15,965
TOTAL	<i>No #</i>	19	66	53	20	15	173
	<i>Value</i>	2,926	239,233	178,199	21,804	13,263	455,424



Yearly progress of In-Kind



In-Kind Contributions @ ESS

Open Issues

IKC Issues: VAT

- VAT on IKC was and still is an issue at ESS
 - Initial assumption that all IK contributions to ESS were not VAT liable
 - Actual situation:
 - VAT costs associated with activities by Partners in Member States (*satisfactorily understood and solutions found case by case*)
 - VAT costs related to deliveries and installation in Sweden (*not yet fully clarified, even with equipment delivered and installation activities running*)
- VAT is not an issue in case of commercial transactions

IKC Issues: VAT in Member State

- Potential solutions can broadly be divided into four groups:
 - Direct exemption or VAT recovery by National authorities on the basis of delivering In-Kind Contributions to an exempt international organisation or as a business transaction
 - Purchase performed by a Representing Entity, acting in the name and on behalf of a Member State of the ERIC for delivering in-kind;
 - Purchase performed by a Representing Entity, acting on behalf of ESS as an ERIC for delivering in-kind;
 - Allocating cash resources from Members to Partners via ESS, for the specific IK contribution

IKC Issues: VAT in Sweden

- Questions that need to be clarified include, but are not limited to:
 - Is the equipment taxed upon delivery? If the assumption of out-of-scope IK deliveries stands, can that cost be excluded?
 - What type of installation is occurring?
Will the equipment become part of the real estate?
 - What is the Partner's legal status in Sweden, does the Partner have a registered subsidiary?
 - Who is doing the installation work, the Partner itself, or a third-party supplier (sub-supplier), or ESS with assistance from the Partner?
 - What is the value of the installation work?

IKC Issues: Transfer of ownership

- The standard IKCA template separates the risk transfer and the transfer of ownership
 - Risk is transferred to ESS already when the equipment (tangible goods) is first delivered to ESS in Lund
 - Ownership however is transferred only after the installation, testing and commissioning by the approval of the in-kind contribution by the ESS Council
 - Both from a legal and practical point of view, this means that ESS will be in possession of some parts and equipment for a certain period of time (sometimes an extended period of time) during which ESS has the risk for this equipment (and therefore should insure) but which are still owned by the respective Partner

IKC Issues: Transfer of ownership

- As ESS is now starting to receive more and more equipment for storage and later installation work, aspects related to ownership transfer will require further work and clarification beyond the current wording of the IKCA template
- In some cases the transfer of ownership is further complicated when Partners have been funded with European Union Structural Funds for their contributions to the ESS; in fact the EU Structural Funds have specific constraints over the transfer of ownership, that must be taken into account

IKC Issues: CE Marking

- ESS management has decided to apply CE-Marking in order to meet high safety, health, and environmental protection requirements
 - The reference to CE-Marking was not explicitly captured in the Technical Annexes, but rather implicitly by requesting to prove the compliance with the European Directives
 - Unlike a commercial company, the typical ESS In-Kind Partner Institutes, are not used to prepare CE-Marking on their own, hence a support from ESS through the Quality Division is necessary

IKC Issues: CE Marking

➤ Two possible approaches

➤ BEST CASE:

The IK Partner has an advanced approach to quality management, quality and safety system certifications, technical standards and is able to proceed on its own to CE Mark the equipment supplied to ESS

➤ “STANDARD” CASE:

The IK Partner has to supply ESS all the relevant technical and quality documentation, together with, where applicable, a declaration of incorporation

In-Kind Contributions @ ESS

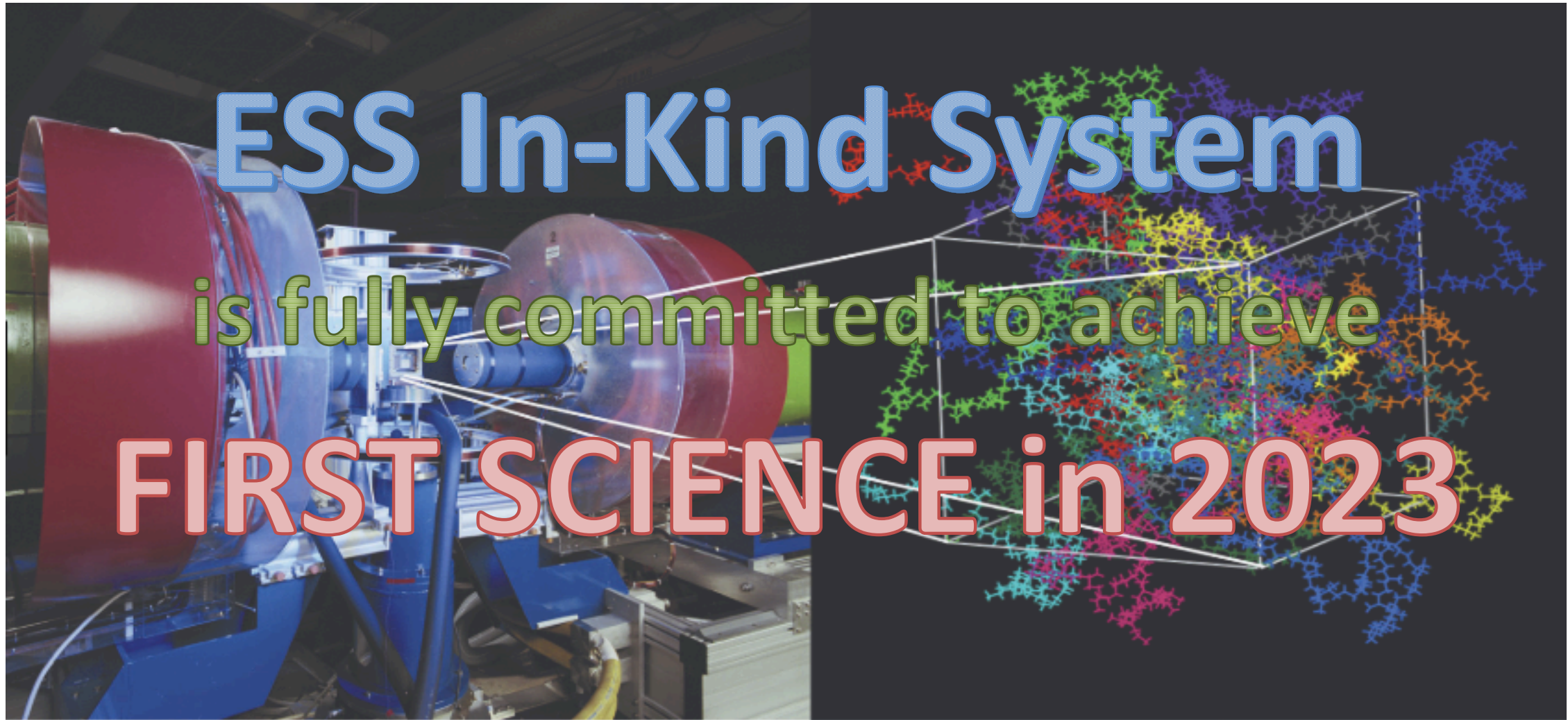
Conclusions

Conclusions

- ✓ New management for and special focus to IK
- ✓ Alignment of IK to implementation
- ✓ IK during Operations being established
- ✓ Specific issues to be solved (VAT, etc.)



The commitment



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Thank you!

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