Build on Lessons Learnt on IK Contributions

5th Work Package 3 Workshop

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Summary of Lessons Learnt

- *#1 Delivery and acceptance process*
- *#2 Developments of industry capability and capacity for supplying big science projects*
- *#3 Changes of requirements after signature of TAs*
- *#5 Collection of information from in-kind partners on the real schedule of ik contributions*
- *#10 In-Kind stakeholders management*

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Lesson Learnt #1

Delivery and acceptance process

- The process "To receive, accept and accredit In-Kind Contributions" is a complex sequence of activities pertaining to many different fields of competence, like logistics, engineering and technology, quality control and quality assurance, administration and finance, legal and fiscal.
- ESS Bilbao have actively worked in stablishing procedures for:
  - Deliveries
  - Acceptances

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Lesson Learnt #1 - Procedure

Delivery and acceptance process

- Delivery request (SDE)+Packing List(PL)
- Code & folder
- Acceptance Procedure/Document (AP/AD)
- Shipment Authorization (SA)
- Preadvise + Delivery Check List
- Shipment (Insurance)
- Transportation->unloading->inspection: DCL signed
- Optional: quality check after opening the boxes
- 45 days for testing (agreed prior SA signature)
- AD signature -> start of warranty

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Lesson Learnt #1 - Templates

Delivery and acceptance process

	DOC DESCRIPTION:	
	DOC CODE:	
	CREATED BY:	
	APPROVED BY:	

ESSB-840-03-IF02 Packing List Rev3

VERSION	DATE	MAJOR CHANGES	REMARKS

SENDER:
ESS Bilbao
Parque Tecnológico de Bizkaia
Laida Bidea, Edificio 201 – Pab. 4
48170 Zamudio – Spain

DESTINATION ADDRESS:
ESS Lund
Gate B / G02
Odarslövsvägen 113
224 84 Lund - Sweden

PACK Nº	LABEL/CODE	UNITS	DESCRIPTION	TYPE OF LOAD	OUTER DIMENSIONS (LxWxH, mm)	WEIGHT (Kg)	PICTURE	UNLOAD MEANS SUGGESTED	UNLOAD AREA	BUILDING DESTINATION	VISUAL INSPECTION

Preadvise template for ESS Logistic

SOLICITUD·DE·ENVÍO

ESSB-840-03-IF01 Solicitud de Envío Rev.3

Delivery code	
Responsible of the delivery	ESS Bilbao / Manufacturer
Equipment to be Delivered	
Place of the delivery	
Manufacturer	
Contact in the manufacturer (if responsible for the delivery)	
ESS Bilbao Contact	
IK Reference	
Delivery Terms	
ESSB project/subproject	
Order/file	
Unloading place	
Expected loading date	
Expected delivery date	
Number of parcels	
Detailed description of content	
Size of each parcel	
Parcel reference (if applicable)	
Weight of each parcel in Kg	
Total weight	
Carrier name	
Carrier phone number	
Special unload tool needed	
Contact for unloading	
Need assistance from Skanska	
Special storage conditions	
Truck information	
Comments	

Attach Packing List

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Lesson Learnt #1 - Templates

Delivery and acceptance process

ACCEPTANCE DOCUMENT

Supplier:
Project Results:
Arrival date at ESS-ERIC:
ESS Bilbao Project Number/ Subproject:
Technical Annex Number:
Earned Value:

The components of the Project Result *"XXX"* of *TA number*, have been successfully delivered to ESS. Please see attached document/s containing the delivered Parts and the corresponding reception verification tests.

ESS Bilbao will not be responsible for any damage occurred if the goods are not used in accordance with the specifications and relevant user documentation, after the Delivery Check List has been signed by the ESS ERIC Logistic Coordinator.

The parties hereby sign to agree that the Project Results *"XXX"* have been received in a good condition, tested, installed and successfully approved within 45 days of receipt thereof, according to the Technical Annex AIK 8.1 RF Warm Linac.

The approval of the Project Results *"XXX"* by the virtue of the signature of this document shall not relieve ESS Bilbao of its responsibility for the completeness or correctness of the Technical Annex *number*. However, ESS Bilbao´s liability for defects on the Project Results shall be limited to two (2) years following approval of this Acceptance Document, for Project Result *"XXX"*. As a commercial component, ESS Bilbao warranty defects responsibility for those subcontracted items (Commercial Components) is satisfied by passing on the benefit of subcontractors' warranties to ESS ERIC and liability for such defects in respect of subcontracted items is limited to assigning the benefit of the relevant subcontractor's warranties to ESS ERIC accordingly. (incluir solo si el project Result es comercial)

SHIPMENT AUTHORIZATION

Supplier:
Project Result:
ESS Bilbao Project Number/ Subproject:
Technical Annex Number:
Earned Value: Once accepted, this equipment will represent an Earned Value in Technical Annex XX of EUR XXXX (XX%)

It is hereby stated that the *Project Result* has passed the Factory Acceptance Tests and is ready for shipment to ESS ERIC in Lund. All the documents associated with this shipment are complete and correct and have been reviewed by both parties.

The documentation reviewed and approved by both parties is as follows:

- *Technical Specifications*
- *Acceptance Test Procedure.*
- *Acceptance Test Data Sheet Report*
- *Statement of Conformity*

No other further documentation will be required by ESS ERIC for the shipment of the *Project Result*.

Therefore, the parties hereby sign the agreement to authorize the shipment of the project result *Project Result* to ESS ERIC.

Technical Responsible from ESS ERIC	**Technical Responsible from ESS Bilbao**
Full Name:	Full Name:
Signed:	Signed:
Date:	Date:
ESS ERIC TA Coordinator	**ESS Bilbao TA Coordinator**
Full Name:	Full Name:
Signed:	Signed:
Date:	Date:

DELIVERY CHECK LIST

Supplier:

Delivery Number:

Equipment:

ESS Bilbao Project Number:

Technical Annex Number:

BEFORE UNLOADING:

- **Visual inspection upon delivery:**

  Inspect the external packaging for signs of damage or excessive movement in transit before the contents are handled or removed from trailer. Evidence any problems by taking photos of damages or sign of movement. If there are any damages, have the driver to sign the document to verify the damages before unloading.

- **Tilt watch:**

  Before handling or removing the components from the trailer, identify the locations of tilt-watches (if used) and note signs of activation or damage to the tilt-watch that could have been caused by nearby items during transit. If there are any damages, have the driver to sign the document to verify the damages before unloading.

  Specific checks for this delivery: *(please complete if specific checks are required)*

AFTER UNLOADING

- **Component and quantities:**

  Check that the correct component(s) has been delivered and in the right quantities against the delivery note.

  Specific checks for this delivery: *(please complete if specific checks are required)*

Delivery Check List Notes: (To complete by ESS ERIC Logistic Coordinator)

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Lesson Learnt #1 - Acceptances

Delivery and acceptance process

ESS BILBAO PROJECT RESULTS DELIVERED TO LUND
2022/04/04 V27

ESSB TOTAL DELIVERED:	**26.061.170,71 €**
ESSB TOTAL ACCEPTED:	21.386.760,76 €
WAITING FOR ACCEPTANCE:	**4.674.409,95 €**

Notes:

Delivery Date: Signing date of Delivery Check List/For Installation TA when Installation is completed

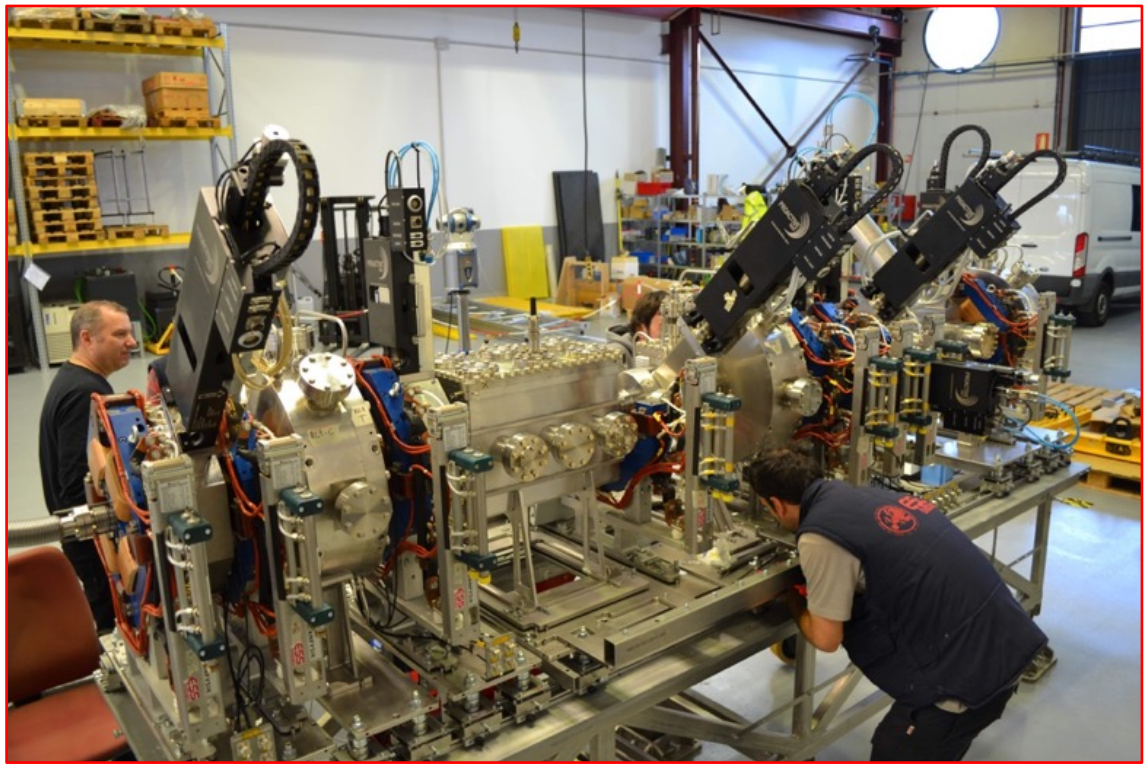
AIK 3.1						
MEBT						
Project Result	% EV	EV €	Delivery code	Delivery date	Acceptance	Invoice
General MEBT	16	723.565,60 €	ESSB-DL19003-MEBT	12/6/19	10/9/19	
Magnets	11	497.451,35 €	ESSB-DL19003-MEBT	12/6/19	10/9/19	
Bunchers	9	407.005,65 €	ESSB-DL19003-MEBT	12/6/19	10/9/19	Fra_19_03_WIK (SENT)
Chopper	15	678.342,75 €	ESSB-DL19003-MEBT	12/6/19	10/9/19	
Collimators	7	316.559,95 €	ESSB-DL19003-MEBT	12/6/19	10/9/19	
MEBT PBI	20	904.457,00 €	ESSB-DL19003-MEBT	12/6/19	10/9/19	
SSPA_1	7	316.559,95 €	ESSB-DL20015-SSPA1-BTESA ESSB-DL22003-Circulator3-BTESA	24/11/20 44.599,00 €	SENT 23/3/22	Pending Fra POS 53-59
SSPA_2	2	90.445,70 €	ESSB-DL21009-SSPA2-BTESA	24/4/21	13/6/21	
SSPA_3	1	45.222,85 €	ESSB-DL21012-SSPA3-BTESA	29/9/21	SENT 23/3/22	
RFDS	1	45.222,85 €	ESSB-DL19001-MEBT	25/3/19	1/4/19	Enviada:Fra_19_01_WIK (pos67, 1%, SAR) (SENT
	3	135.668,55 €	ESSB-DL19006-WGSupports-Stubs ESSB-DL19007-WGSupports-Tunnel	17.7.19 26/7/19	9/9/19	Pending Fra (3% resntante) 135.668,55 €
LLRF	8	361.782,80 €	ESSB-DL21001-Cables and LLRF accessories	25/2/21	11/4/21	
	100	4.522.285,00 €				
Delivered AIK 3.1:	**100**	**4.477.062,15 €**				
Accepted AIK 3.1:	92	4.160.502,20 €				
Waiting for acceptance AIK 3.1:	8	316.559,95 €				

FINAL REPORT

AIK 3.7						
MEBT Installation						
Project Result	% EV	EV €	STATUS ESS-0060903	Delivery date	Acceptance Effective day	Invoice
STAGE 0: Preparatory Works	20	80.000,00 €	100%	June 2019	12/6/19	19_04_WIK
STAGE 1: Rack Installation	15	60.000,00 €	90%		4/3/21	

Lesson Learnt #1 – Important deli
Delivery and acceptance process

Almost 60 deliveries including major components ACCSYS: MEBT, RF



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Lesson Learnt #1 – Important deli
Delivery and acceptance process

Almost 60 deliveries including major components TAR: TBD, MV, TW

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Lesson Learnt #2

Developments of industry capability and capacity for supplying big science projects

- The area of this discussion is the effort of Field Coordinators (FC) also in collaboration with the Industrial Liaison Offices (ILO) to build capacities in the national industry and suppliers to enhance their participation in Big Science Projects.
- How:
  - ILO: mtgs, VCs, phone calls, events (ESS Spanish Industry Day, Strategy WSs)
  - Industry/suppliers: mtgs, VCs, phone calls, exchange of information, collaboration in Innovation projects to develop prototypes
  - INEUSTAR/INDUCIENCIA: Spanish Science Industry Association

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Lesson Learnt #1 - IK contribution

Developments of industry capability and capacity for supplying big science projects

Sub. PROJECT	SUMMARY	TA No.	CB VALUE €
ACCSYS	MEBT	AIK. 3.1	4.522.285,00 €
	Installation, Testing and Commissioning of the MEBT	AIK. 3.7	400.000,00 €
	RF for Warm Linac	AIK. 8.1	6.644.000,00 €
	Klystron Modulators for RFQ and DTL	AIK. 17.6	3.370.000,00 €
ICS	MEBT Integration		963.258,00 €
TARGET	Target Wheel		8.420.000,00 €
	Protom Beam Instrume		540.000,00 €
	Proton Beam Window		890.000,00 €
	Monolith Vessel		4.680.000,00 €
	Tuning Beam Dump		2.480.000,00 €
NSS	Beam Trasport Optimisation for the Extreme Condition Diffractometer	NIK 2 #3	20.000,00 €
	Training of Motion Control Engeneer (ES)	NIK 5.3 #7	97.000,00 €
	Secondment of a Mechanical Engineer to LOKI	NIK 6.3 #1	54.000,00 €
	Instrument Miracles - PHASE 1	NIK 6.16 #1	423.500,00 €
	Miracles In-Kind Contributions for PHASE 2-4	NIK 6.16 #3	11.590.250,00 €
TOTAL			45.094.293,00 €

BrightnESS Research

Lesson Learnt #1 - ESS procurements

Developments of industry capability and capacity for supplying big science projects

year	Company	Description	Value
2021	Nortemecánica	Neutron Beam Windows & Plugs	170.670,00 €
	Nortemecánica	Light Shutter System (LSS) Frames	384.700,00 €
	Jema Energy	Design, fabrication and delivery of 5 klystrons modulators	5.425.070,00 €
2020	Pacadar (Direct Contract)	First common shilding manufacturing	3.915.860,00 €
	Nortemecánica	Inner shielding (5th Part)	298.750,00 €
	Asturfeito	Inner shielding (4th Part)	1.590.000,00 €
2019	Tekniker	Remote Clamp	236.411,00 €
	Asturfeito	Inner Shielding - Part 2 and 3	4.845.000,00 €
	Nortemecánica	Concerning provision of raw material and manufacturing of the In-Bunker Baseplates	127.750,00 €
	ENSA	Monolith Portblock Package	5.987.972,00 €
2018	Jema Energy	Design, fabrication and delivery of 9 klystrons modulators	9.155.193,00 €
	TEKNIKER	Support in Engineering Services	Framework Agreement
	Thune Eureka SA	Ground Shielding and vessel support	280.100,00 €
	Asturfeito	Inner Shielding-first part	640.000,00 €
2017	GMV Aerospace and Defence, S.A.U.	Integrated Control Systems	Framework Agreement
	Procon Systems, S.A.	Integrated Control Systems	Framework Agreement
2016	GTD Sistemas de informacion SAU	Technical Consultants and Services, covering on-site and off-site consultants ans specific services	Framework Agreement
	IDOM	Technical Consultants and Services, covering on-site and off-site consultants ans specific services	Framework Agreement
		TOTAL	33.057.476,00

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Research and Innova

Lesson Learnt #1 LL

Developments of industry capability and capacity for supplying big science projects

- Working in close collaboration with both industry and Industrial Liaison Offices, with frequent exchange of information by phone, mail, meetings, workshops and other events, can lead to an industry capacitation that ensures a high level of returns on investment to politically justify the country participation in international big science projects.
- Iberia Hub:
  - up to 76% of the total expenditure in contracts for IK work since the beginning of the collaboration has stayed at national or regional level
  - in the period 2017-2019 Spain was the country (after Sweden) with the highest cumulative value of almost 30 M€ of ESS contracts awarded (with a value higher than 50.000 € each)

BrightnESS2 is funded by the European Union Framework Programme for Research and Innovation Horizon 2020, under grant agreement 823867

Thank you!

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