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Supplies >200kCHF - Module 1 Procurement Rules, Strategy and Market Survey http://procurement.web.cern.ch/

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Procurement training plan



- Module 1: Procurement Rules, Strategy and Market Survey (2h)
- Module 2: Invitations to Tender and Price Enquiries (2h)
- Module 3: Contract Management and RACI (1h30)
- 1-day service contracts
- Price Enquiries >50kCHF

Check the learning hub



Module 1 layout







Training objectives

Learning objectives

- Gain knowledge on procurement rules and procedures
- Understand the roles and responsibilities of the technical officer
- Develop awareness on key strategic considerations
- Get acquainted with best practices

Outcomes. Each of you will:

- Be able to challenge one's preconception of a procurement strategy
- Be more effective when initiating a tendering process with the Procurement Service



Some housekeeping





Part one: Procurement Rules

Mission statement and commitment

The Procurement Service (PS) procures all supplies and services for CERN

Meeting the technical, delivery and performance requirements	At the lowest possible overall cost
While achieving balanced industrial return for CERN Member States*	Respecting CERN Procurement Rules

*The above applies for cases where only CERN contributes to the financing. Please contact the Procurement Service for cases where external funding is involved (Eg. for Experiments).



European Organization for Nuclear Research *Organisation européenne pour la recherche nucléaire*



Procurement strategy and policy

Some figures



Procurement expenses over time



Organisation européenne pour la recherche nucléaire

CERN



*Excluding visiting research teams and collaborations



Importance of industrial return

Yearly Budget (contributions 2022)

	Country	Percentage of Total	Amount (CHF)		Country	Percentage of Total	Amount (CHF)
-	Germany	20.32%	245 017 700		Czech Republic	1.10%	13 220 000
	United Kingdom	14.20%	171 219 200	۰	Portugal	1.09%	13 148 350
	France	13.42%	161 894 900		Greece	0.99%	11 894 950
	Italy	10.10%	121 766 050		Hungary	0.71%	8 580 300
	Spain	7.25%	87 403 500	۲	Slovakia	0.51%	6 151 800
	Netherlands	4.63%	55 847 250	C *	Turkey*	0.41%	4 961 450
•	Switzerland	3.84%	46 281 900		Bulgaria	0.33%	3 977 800
	Poland	2.88%	34 787 950	æ	Serbia	0.25%	3 002 950
	Belgium	2.71%	32 668 100	C	Pakistan*	0.15%	1 843 950
-	Sweden	2.49%	30 045 050	÷	Slovenia**	0.12%	1 484 800
	Norway	2.21%	26 636 300		Estonia**	0.11%	1 310 850
	Austria	2.15%	25 937 750	,	Cyprus**	0.09%	1 025 350
\$	Israel	1.95%	23 501 450		Latvia*	0.09%	1 024 850
	Denmark	1.77%	21 381 600		Croatia*	0.08%	1 000 000
()	India*	1.40%	16 838 200		Lithuania*	0.08%	1 000 000
+-	Finland	1.30%	15 708 050		Ukraine*	0.08%	1 000 000
	Romania	1.20%	14 424 700			Total 100%	1 205 987 050



Poorly balanced Member States (Supplies)

(1st March 2023 – 29 February 2024, based on the previous 4 calendar years)





Country of origin

"Country(ies) where the **supplies** (including their components and sub-assemblies) are manufactured or undergo the last major transformation by the contractor or its sub-contractor"



Supplies

If at least **60%** of the total amount of the bid comes from a poorly balanced MS, then the **whole bid** will be treated as that from a bidder in a poorly balanced MS.







European Organization for Nuclear Research Organisation européenne pour la recherche nucléaire

CERN

Procurement timeline



 Timelines can be (much) longer, they mostly depend on your capacity to come up with technical documents on time;

Beware

- Spec committee review may take time;
- In case of contribution from CERN, CERN's Finance Committee approval may be needed (+ up to 12 weeks).





Limited tendering

« Limited tendering is foreseen by the CERN Procurement Rules to improve the industrial return of very poorly balanced Member States. »





Technical auditing

Purpose	 Review MS and IT documents (incl. price enquiries for R&D) Ensure Procurement Rules are complied with 				
Participants	 Simplified technical auditing (MS) Technical Officer (TO) Procurement Officer Head of TO's Dept. or representative A representative from HSE Unit A technical expert from another dept. EN's Spec Committee team (ATS sector only) 	 Specification Committee (IT) Technical Officer (TO) Procurement Officer Head of TO's Dept. or representative Head of Procurement Service or representative A representative from HSE Unit A technical expert from another dept. EN's Spec Committee team (ATS sector only) If necessary, another representative (e.g. Legal Service) 			
Leadtime	1 week or more	2 weeks or more			



Adjudication: lowest compliant bid



*The alignment rule may apply



Confidentiality / communication

Confidentiality	•	Keep any information on the procurement procedure strictly confidential (even after contract signing !)
Communication	•	Any communication from CERN shall be made by procurement service (including technical clarifications).
	•	During the tendering process, any communication from bidders shall be directed to the procurement service.



Code of professional ethics

https://procurement.web.cern.ch/en/code-of-professional-ethics

Maintain the highest standard of **integrity** in all commercial relationships Reject any commercial practice which might reasonably be deemed improper

Optimise the use of resources for the benefit of CERN

Ensure the accuracy of information provided or exchanged

Respect the **confidentiality** of information received



Code of professional ethics

Never use authority or position for personal gain

Avoid conflict of interests or situations that could be perceived as such

Declare to your group leader who should declare to the Head of IPT department* any personal interest that might affect, or be seen by others to affect, impartiality or decision making

Remain **impartia**l in all commercial dealings and not be influenced by those with vested interests

Comply with the gift policy

* In case the personal interest relates to a procurement procedure, the group leader should declare it to the Head of the PS.



Poll time!



The technical officer (TO)



Defines the procurement needs and issues the DR

Drafts the technical documents, in accordance with templates available

Proposes potential bidders to consult within the Member States

In collaboration with PS, carries out the procurement process

Prepares the DAI or reviews the contract prepared by the PS

Performs the technical follow up of the contract

In collaboration with PS, ensures that the contractual terms of the contract are fulfilled

Checks, accepts or rejects the delivery of supplies

Evaluates the supplier (automatic questionnaire)



Questions ?



Part 2: Procurement Strategy

Before we start...

Are you ready?



Make or buy

Who is in the best position to do the job?

• Does the technology exist?

- Is the industry mature enough?
- Did we make some prior consultation?
- Time constraints?
- Make at CERN (eg. via existing contracts)?





Key

questions

The "Buy" check list

Question

Are we able to define requirements?

Are the corresponding inputs and outputs clear?

Yes

Is our price estimate consistent?

Are there <u>vendors</u> to fulfill my needs?

Is CERN key staff available ?

Is the management in line with the approach?





Procurement strategy

Poll time!





What are the goals and objectives that we want to achieve?





Importance of strategy

"A strategy is a plan of action designed to achieve a specific goal."

The <u>necessary precondition</u> for formulating strategy is a <u>clear and</u> <u>widespread understanding of the objectives or ends to be obtained</u>.





Influencing factors





Brainstorming time!





CERN

Defining the specification type

- Off-the shelf or non-standard products which can be produced with existing manufacturing techniques or technologies:
- Functional specification



- Non-standard products where industry has neither the required know-how nor the interest to develop and design the products:
- Build-to-Print specification



Prototypes and or Pre-series might be required.


Defining the contract type

	Firm commitment contract	Framework contract
Quantities	Fixed	Estimated
Deliveries	Fixed, based on project needs	Fluctuating Based on release orders
Expiry	End of project	Expiry date (or budget ceilling reached)

- Are you the only requestor?
- What about other departments or experiments?



Market Knowledge Key players and how to maximize competition





Group of firms and subcontracting

- The industry knows better how to organise
- Do not put unnecessary restrictions
- Ask yourself: what <u>cannot</u> be subcontracted?
- By default, groups of firms are allowed

General Conditions of CERN Contracts:

Group of firms: "[...] a consortium, joint venture or any other arrangement concluded between legal entities for the joint execution of the Contract [...] Each member <u>shall be jointly and severally liab</u>le for the performance of the Contract."

Subcontracting: [...] any arrangement whereby the Contractor contracts with another legal entity (the subcontractor) [...] for the delivery of a major part of the Supplies [...]





Splitting



	Advantages	Drawbacks
•	Timely supply for big quantities (if a single contractor cannot fulfill the entire need) Risk mitigation for complex supplies Better distribution among Member States	 Increased follow-up Higher cost Potential compatibility issues between the two supplies
	Foresee additiona	I purchase options !



Prototyping: possible scenarios

Definitions:

- Prototype unit: product that does not exist yet and for which all later forms are developed.
- Pre-series units: units to validate the industrialization protocol
- Series units: project need





Risks levels and risk types

- **Low risk:** standard / off-the shelf products.
- Medium risk: non-standard products which can be produced with existing manufacturing techniques and/or technologies, but industry has no experience.
- **High risk:** new high-tech products requiring a conceptual design phase. The manufacturing methodology has to be developed.





Is CERN in a better position to carry (part of) the risks?



Risks decision matrix

High

	Should manage & monitor risk	Must manage & monitor risk	Must manage & monitor risk	
m p a	Consider taking risk	Should manage risk	Must manage & monitor risk	
t	Should accept risk	Should accept risk but monitor	Should monitor risk	
Low		Likelihood		





Conclusion



Think well ahead of the tendering procedure



Think out of the box when defining the scope



Challenge your preconception of the strategy



Adopt a risk-based approach and mitigate risks in the IT



Ask advice to the procurement service



Questions ?



Other important considerations

Activities at CERN



- Safety coordination (Prevention Plan, VICs, etc.)
- "Working on the CERN Site" applies
- Registration and accesses: it takes time!
- VAT: separate invoices needed between FR / CH
- Subcontractors registered under the contract
- Activities performed in CH + FR? 4P regime applies!





Key points

Civil works





Key question	Impact
Is SCE team aware and ok with the project ?	Construction works have to go through SCE's planifiction and validation process.
Ground conditions? Is site survey information available?	Ground conditions will greatly influence the price
Who takes care of the design? CERN, a 3rd Party Consultant or the Contractor?	The scope of supply will greatly vary (Design and/or Build)
Do the General Conditions of CERN Contracts provide sufficient protection?	A dedicated contract may be needed for complex works
What are the boundaries and interfaces?	Dependencies and co-activity to be considered
How well can we pre-define the design and required quantities at tender stage?	Helps to select a fixed price or remeasurable payment mechanism
Any potential impact on existing operations or facilities, including sensitive equipment?	A specific insurance may be needed





Software



Usually, CERN does not own the software, it pays for a license of use.

- Quantity: per user, per server, per site ?
- Time limit: perpetual vs annual subscription?
- Use: research only? KT? Open hardware repository? Other?
- Geographic restrictions: Meyrin, Prevessin or both? Home use? Use in external institutes?
- Maintenance (bug-fixing, upgrades): included?
- Always have an exit strategy and avoid dependency (think of the Microsoft syndrome)



Key

points

The licence terms are central and dictate the price!



Environment

A WORD FROM THE DIRECTOR-GENERAL 2016

I believe CERN should become a role

model for an environmentally-aware scientific research laboratory.

2021



Increasing CERN's visibility through its impact on society

Maximising CERN's impact on society is a duty of a responsible public research organisation and a crucial, strategic tool to expand CERN's visibility and ensure its long-term future

Environment

- Environmental and sustainability considerations must be included in all we do ab initio
- Meet (ambitious) objectives of first Environment Report (released to the public in 2020) https://hse.cern/environment-report-2017-2018
- □ Energy savings and re-use (e.g. East Area, LHC Point 8, Computing Centre in Prévessin)
- Explore and pursue CERN's technologies with potential applications to environment



Environment

Depending on the sector...

Impact of purchased goods and services on an organization's carbon footprint



Other Purchased goods and services



At CERN, procurement accounts for more than 90% of CERN indirect emissions.



Intellectual Property (IP)



General Conditions of CERN Contracts:

"[...] Any Intellectual Property generated in the performance of the Contract shall be vested exclusively in CERN [...]"

Engineering & prototyping orders: make sure that CERN can use the IP it pays for !



Questions ?



Part three: Market Survey

Objectives and key points

Objectives	 Consult the market as widely as possible Specify to select: set criteria in accordance with your needs Select potential vendors based on their capabilities (not their products!)
Key points	 Follow the plan: the documentation implements and reflects the agreed procurement strategy Start with the templates, but adapt them to your strategy





Documents to be produced

Document	Purpose	Prepared by:						
Technical Description	 Light description of the future contract's scope (deliverables, quantities, key technical aspects, timescales) Describes the qualification procedure (e.g. samples, prototyping) 	Technical Officer						
Qualification Questionnaire	 Lists the criteria that the firm must meet (such as technical competence and experience, references, size) to qualify for the IT Completed and returned by firms applying to participate in the future IT 	Technical Officer						
Risks matrix	 Identify potential risks Implement mitigation measures 	Technical Officer						
List of firms	 Identify vendors in all Member States, focusing on poorly balanced Member States 	Technical Officer + Procurement Officer						
	+ (once bidders have submitted their answers)							
Submissions evaluation matrix	1. Show in one document, for each criterion, the MS results	Technical Officer						
Memo of non- qualified firms	1. Justify why non-selected firms are excluded	Technical Officer						



Type of criteria



	 Administrative situation
	• Competence and experience (eg. skills, references)
	 Financial (minimum turnover)
	 Production capacity (nb of units produced)
ype of	 Equipment and facilities (eg. assembly and test
riteria	machines, clean rooms, etc.)
	 Subcontracting restrictions
	 Quality assurance (certifications, QA system)
	 Sustainability, environment
	• Etc.



Beware, selected vendors should be 100% compliant



List of firms

Search engines, Linkedin, etc.

Previous MS or Price enquiries

Supplier database

Ask colleagues

Attend industrial conferences

Firms having expressed an interest

Industrial Liaison Officers



- A special effort should be made to source firms from PB MS
- There is no limit in the number of firms to invite





DOs and DON'Ts

DOs

- The qualification criteria must be compatible with the reality of the market (contact potential vendors beforehand, ask colleagues, check on internet)
- Organise preliminary information sessions, contact ILOs
- Select vendors based on their profile, not their product
- Visit vendors, check references
- Ask for samples, if needed

DON'Ts

- Do not set unnecessary criteria
- Do not impose restrictions on subcontracting that are not in line with how industry actually organizes the work
- Do not over specify the technical description. It is not a technical specification!
- Do not rely on CERN's supplier database only



Poll time!



Questions ?



Part four: Resources

Procurement Service resources

Procurement Service resources	 List of firms from previous MS / orders Supplier database (per procurement codes, country, etc.) Supplier evaluation Financial survey Blacklisted firms
Procurement Service resources	 Supplier database (per procurement codes, country, etc.) Supplier evaluation Financial survey Blacklisted firms

Suppliers Available

Filter	Countries							Group by Supplier	Export Options		
								Yes No	X Excel		CSV
Show	10 🗸	entries							Search:		
ISO	Supplier Code	Name	Service Provider	Reseller It	Manu facturer ↓↑	URL It	Phone I†	Commercial email	Technical email	Is Sup plier?	Safety Rules
•	BELF01	BELFOR (SUISSE) AG	~				J 0223449129	ch-dispo- ge@ch.belfor.com	ch-dispo- ge@ch.belfor.com	1	8
+	BIC-01	BG INGENIEURS CONSEILS SA	~			۲	J 0584242396	► marco.mincarelli@bg- 21.com	■ marco.mincarelli@bg- 21.com	~	8
+	COLI04	COLIN SWISS AG		×		۲	2 0315335082	≤ sem@colinswiss.ch	≤ sem@colinswiss.ch	✓	-
+	IOTA01	IOTA SA	~				J +33630579521	■ yasemin.cakanlar@iot a-group.com	christian.robbe@iota- group.com	×	
-	CCUE01	CEA CHEMIE UND ENERGIEARMATUREN GMBH	~	~) +496215792870	🔽 info@cea-lu.de	🛛 info@cea-lu.de	×	-
	EUR455	EUROPASCAL GMBH		~		۲) +496181423090	➡ service@europascal.de	■ service@europascal.de	~	-
	TEC324	UNITEC D GMBH		~		۲	J +49821247960	■ supplier@unitecd.com	✓ brignone@unitecd.co m	×	
	CRYO16	CRYOVAC SL		×		۲	2 +34916065463	\bowtie	\searrow	X	



Procurement website http://procurement.web.cern.ch/





RACI MATRIX FOR TECHNICAL OFFICERS IN CHARGE OF PROCUREMENT PROCEDURES >50kCHF

Objective

The objective of this RACI is to provide guidance to CERN technical officers to ensure standardisation and best practice in procurement procedures. The RACI reflects the implementation of the CERN Procurement Rules and the Code of Professional Ethics as well as best practices. References to the applicable reference documents and useful links are made wherever possible in the RACI.

For the present RACI:

- the Technical Officer comprises the technical responsible identified in the contract as well as any person helping him/her to supervise the performance of the services;
- the "Procurement Officer" means the procurement person in charge of conducting the tendering procedure with the technical
 officer as well as the Procurement support and administration team.

Understanding RACI matrix

Letter	Definition	Symbol
R	Responsible / Driver: Who is responsible for the execution of the task?	8
Α	Approval / Signature: • Who has the authority to take decision? • Who signs the document?	2
с	Consulted / Supports: Who can provide expertise or support?	2
I	Informed / Recipient: • Who needs to be updated of the progress? • Anyone whose work and/or task depends on this task?	8





Doing business with CERN http://procurement.web.cern.ch/







Doing business with CERN

Procurement Process



Procurement process for supplies/services financed by CERN

As from January 2014, firms entering a new contract with CERN for the provision of services on both the French and Swiss parts of the CERN site, will have to comply with new rules concerning the law applying to the working conditions of their personnel. Information about these new rules concerning applicable law can be found in the documents

- · Working on the CERN site
- FAQ 🛛 🖼



Who to contact





Contact us!



Questions ?



Thank you

Spare slides: Procurement Rules applicable to the Experiments

Applicable Purchasing Rules

- CERN Purchasing Rules and Procedures apply to all contracts placed by CERN for the Collaborations;
- Depending on the CERN involvement (in particular CERN's financial contribution), the extent of application of the rules may differ (origin of the supply, alignment rule, approval thresholds etc.);
- For the Experiments, four cases have been identified in the CERN Procurement Rules: cases A, B, C and D).



Possible cases for Experiments

IN-KIND CONTRIBUTION BY THE INSTITUTE(S)

- No CERN budget, Collaborations act independently
- CERN Procurement Rules do not apply, CERN is not involved.

CASE A

 Negotiations conducted by the institutes participating in the Collaboration.


ORDER PLACED BY CERN, NO CONTRIBUTION FROM CERN

2 options:

 The Collaboration selects the firm and states that applicable laws have been complied with (proof of correctness document);

CASE B

- CERN launches the tendering procedure:
 - Firms established in CERN and the Experiment's Member States ;
 - No alignment rule.

The Collaboration can request that the contract is awarded only under the condition that at least 50% of the tender value originates from the country(ies) providing the funds.



ORDER PLACED BY CERN, NO CONTRIBUTION FROM CERN

CASE B



Conditions:

- the requesting institute(s) / funding agency must have signed:
 - the MoU* or;
 - a separate <u>Transfer of Risks and Liability*</u>
- CERN's terms and conditions apply, even when the requesting institute / funding agency has already selected the firm.

*Failing which prior approval from CERN's director of FHR sector must be sought





ORDER PLACED BY CERN, 1 CERN BUDGET CODE OR SIGNIFICANT CONTRIBUTION FROM CERN

Tendering by CERN in accordance with CERN Procurement Rules:

CASE C

- CERN Member States only;
- Alignment rule applies



. . .

ORDER PLACED BY CERN, USE OF COLLABORATION TEAM CODE TO WHICH CERN MAKES A CONTRIBUTION

- Tendering by CERN in accordance with CERN Procurement Rules:
 - Firms established in CERN and the Experiment's Member States;
 - No alignment rule;
 - CERN Finance Committee approval required if:
 - Tendering with CERN participation >750kCHF or

CASE D

• Single source with CERN participation >200kCHF





- The MoU, the financing and the Experiment's corresponding procurement strategy might not be compatible with CERN Procurement Rules.
- The Procurement Service must be involved at an early stage!





Beware

European Organization for Nuclear Research *Organisation européenne pour la recherche nucléaire* Procurement Guidelines for Experiments at CERN

CASE A	CASE B	CASE C	CASE D
Does not involve CERN's budget and the collaboration intends to make the purchase without CERN involvement.	Does not involve CERN's budget but CERN is requested to be the contracting party.	CERN contributes to the financing.	Funded by the "Common Fund" established by the collaboration
Funding: N/A	Funding: • Team Code(s) (starting with "T") <u>without CERN money;</u> • CERN budget code: 23000.	Funding: at least one CERN budget code(s).	Funding: Collaboration Team Code(s) (starting with ${\rm eTs}),$ with a contribution from CERN.
CERN Procurement rules do not apply	CERN Procurement Rules apply except:	CERN Procurement Rules apply	CERN Procurement rules apply except: Country of origin: CERN Member States and
CLRN is not the contracting party Negotiation conducted by the collaboration	 <u>Country of origin</u>: CERN Member States and countries in which the institutes funding the collaboration are established? <u>Alignment rule</u>: Net applicable <u>FC approval</u>; needed for award of contract > 750kCHF following tendering procedure by CERN or single tender >200kCHF if the collaboration has not provided a fransfer of risks and liability. 		countries of the collaboration and contributors to the "Common Fund" <u>Alignmet rule</u> ; Not applicable <u>FC approval</u> : only consider CERN contribution
No action meeted from the Procurement service	View of the state of	DR (for requirements > SRCHF), stating the % of (TERX % budgetary contribution Interdering moxess carried soft by by CERN VES FC Approval order signature of the contract	DR (for requirements >500.CTF), using the "contribution" todagetary Tendering process carried ant by CERN NO FC Approval needed? YES FC Approval OLA and purchase order signature of the contract

Procurement Guidelines for Experiments at CERN



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