

2ND HILUMI INDUSTRY DAY

INSTITUTO SUPERIOR TÉCNICO (IST)
31 October 2016
LISBON



AN EVENT FOR COMPANIES WILLING TO TAKE ON THE HL-LHC TECHNICAL CHALLENGES

More information on HL-LHC and future procurement needs
<https://project-hl-lhc-industry.web.cern.ch>

Registration before 30 September 2016
<https://indico.cern.ch/event/557233/>



THE 3RD HILUMI INDUSTRY DAY WILL BE HELD IN THE UK ON 30 MARCH 2017



Doing business with CERN

Anders Unnervik





Legal framework

- CERN, an Intergovernmental Organization, was established in July 1953, by the “Convention for the establishment of a European Organization for Nuclear Research”.
- As an Intergovernmental Organization, CERN is not a legal entity under national law but governed by public international law.
- CERN benefits from immunity from national jurisdiction and execution. Thus, legal disputes between CERN and its suppliers and contractors are not submitted to national courts but solved via international arbitration.
- CERN is thus entitled to establish its own internal rules necessary for its proper functioning, such as the rules under which it purchases equipment and services.

Mission of Procurement and Industrial Services

The mission of the Procurement and Industrial Services group is to:

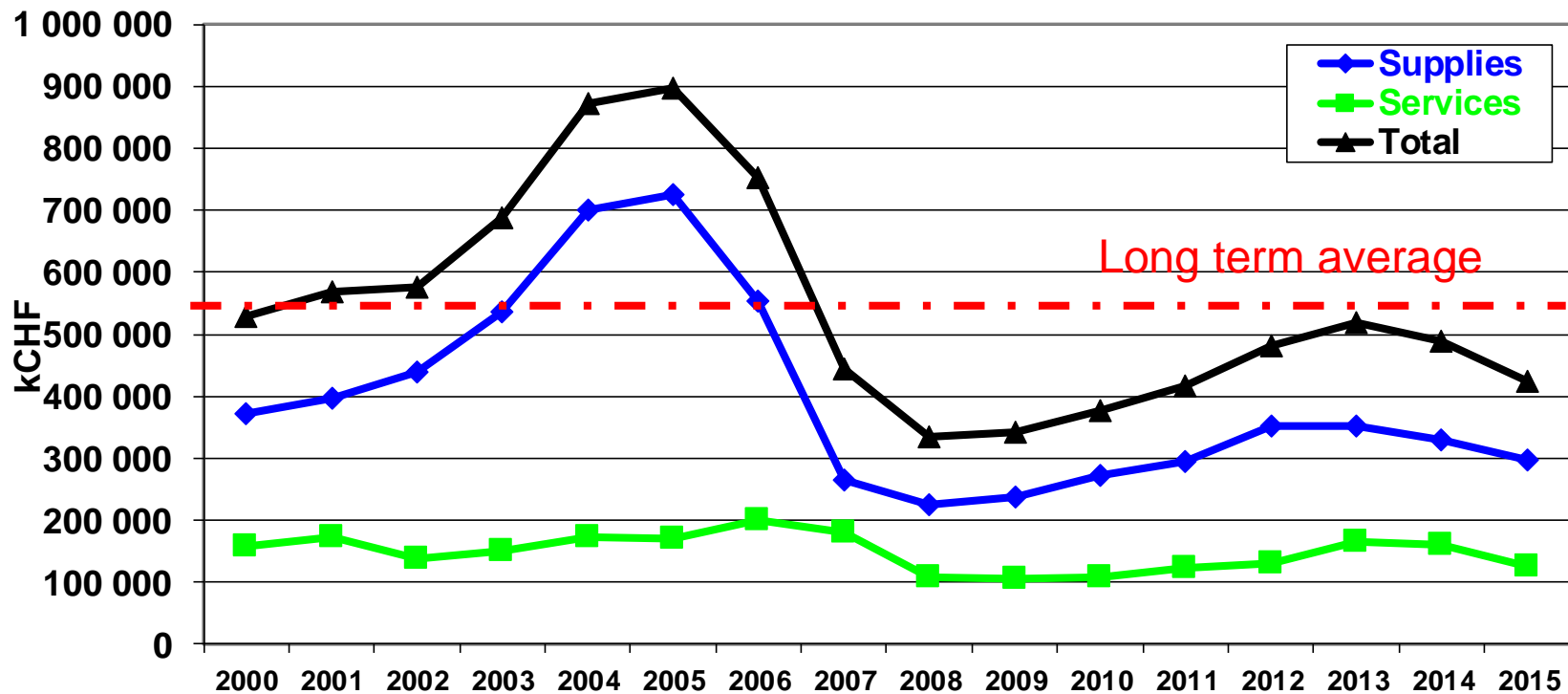
- procure all supplies and services for CERN;
- meeting all requirements;
- at the lowest possible overall cost, while;
- achieving balanced industrial return for the CERN Member States, and;
- respecting the CERN Procurement Rules.

Procurement Principles

- CERN purchases supplies and services and awards contracts in compliance with the principles of *transparency* and *impartiality*
- Limited to firms established in the Member States.
- Invitation to tender documents are drafted in an *objective* way so as to guarantee *fair competition*
- As a rule, CERN's tendering procedure is *selective* and does not take the form of open invitations to tender or price enquiries
- The opening, negotiation and evaluation processes of the bids are *strictly confidential*
- Is either the lowest; or
- Represents the best value for money.



Procurement Expenditures 2000-2015



What do we buy?

Recurrent supplies and services

- **Civil engineering**

Buildings, roadworks

- **Utilities**

Cooling & ventilation

Power distribution, cables, overhead cranes

- **Infrastructure & services**

Metal structures

Mechanical engineering

Radiation shielding

Transport & handling

Safety & access control

- **Installation, operation & maintenance**

- **Data acquisition, computing & networking**

- **Various supplies**

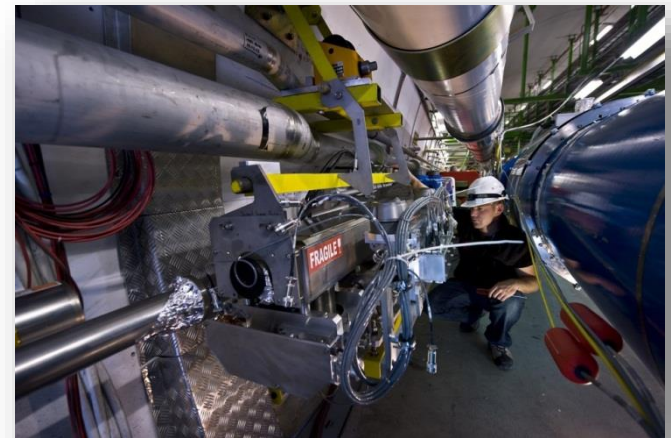
Furniture, tooling, gases, etc.



What do we buy?

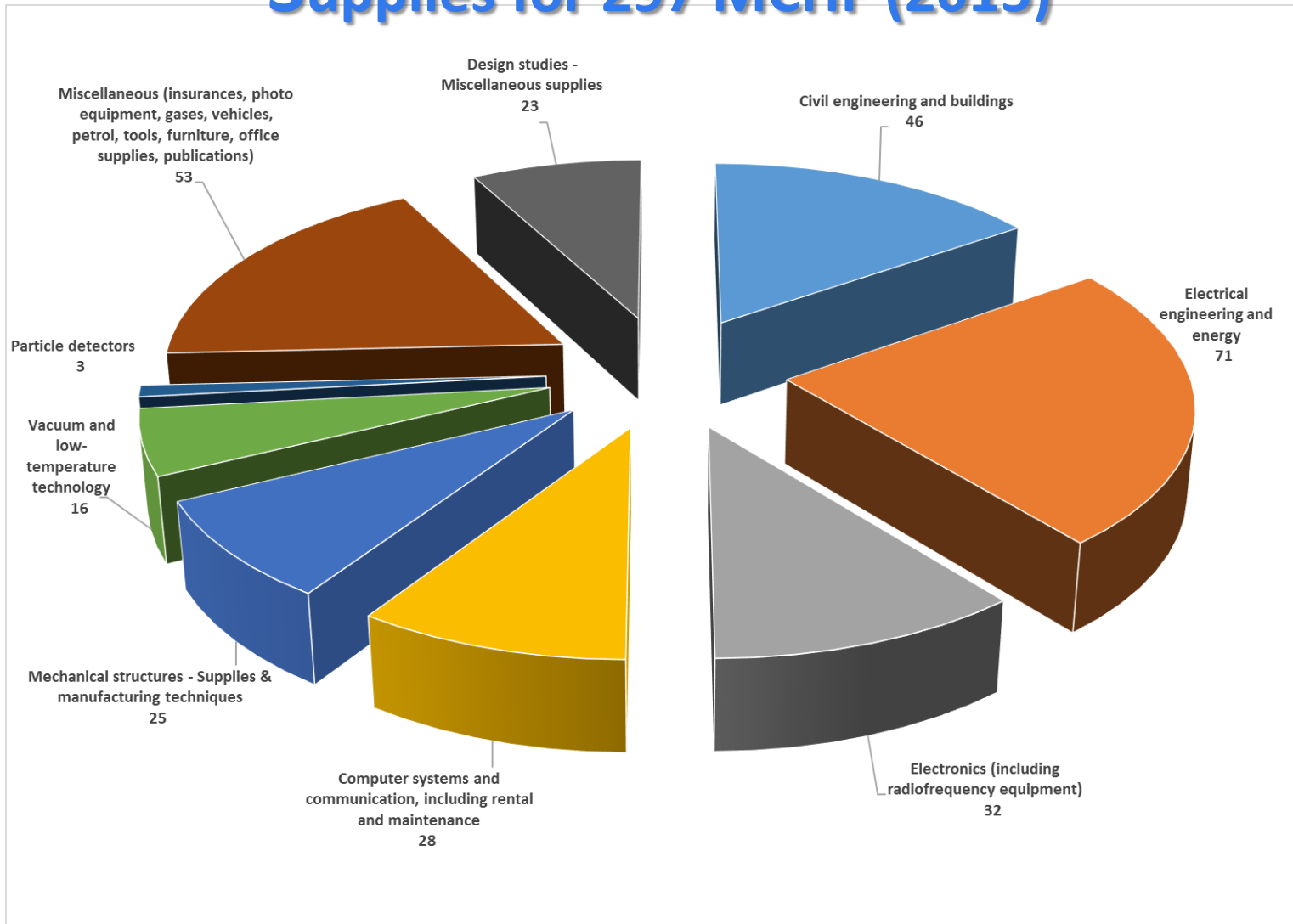
Accelerator technologies required for consolidation projects and new developments

- Industrial controls & field buses
- Timing & “fast” real-time controls
- Beam collimation
- Beam injection, ejection & dump
- Radio-frequency equipment
- Power converters
- Beam instrumentation & diagnostics
- Permanent and electro-magnets
- Cryogenic equipment
- Vacuum equipment



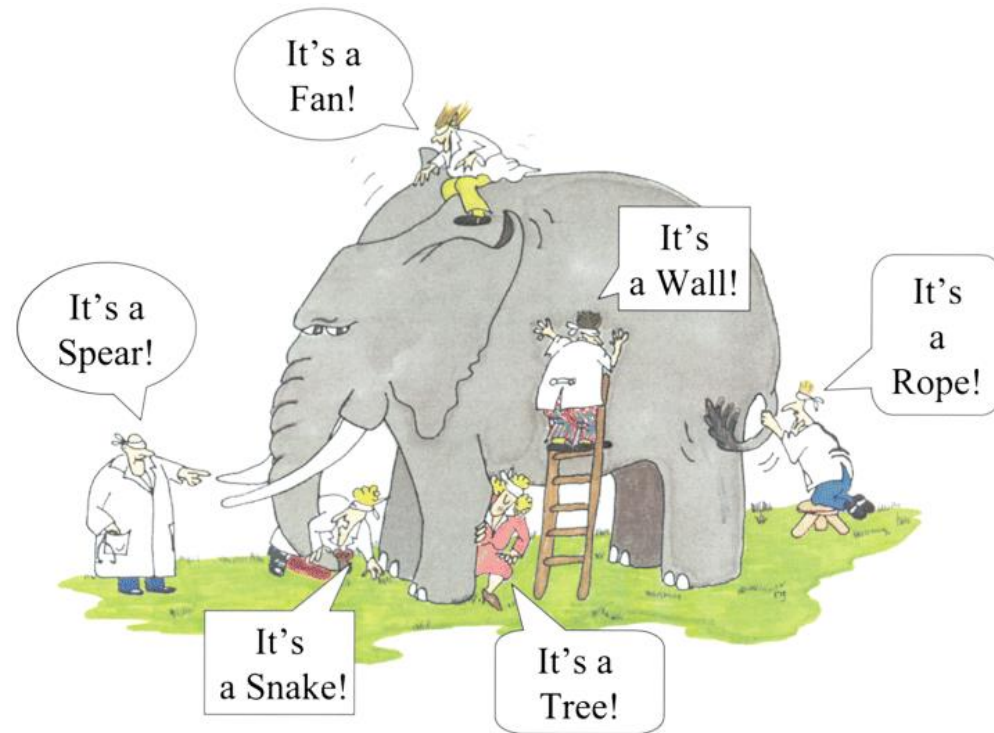
What do we buy ?

Supplies for 297 MCHF (2015)



What do we buy ? Standard or Non-Standard?

- Off-the-shelf or non-standard products which can be produced with existing manufacturing techniques and/or technologies => functional specification
- Non-standard products where industry has neither the required know-how nor the immediate interest to develop and design the products for its existing markets => built to print
- Prototypes and/or pre-series needed?



HL-LHC “Shopping list”



HL-LHC Industry

Industry Relations and Procurement Website for the HL-LHC project

Search this site

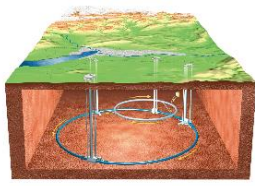
- Home
- General Info
- Procurement Overview
- Tendering
- Acquisition Timeline
- Events
- Contact

Building the HL-LHC with the Industry

The HL-LHC Industry Website has been specially designed for all those firms that wish to participate in this ambitious project. We want to share all the relevant information related to the procurement that will be required to accomplish this major upgrade of the LHC.

The industry will have a crucial role and will be heavily involved within the HL-LHC Project since it will be the main source to provide the technologies and equipment that are required to successfully achieve the goals of this upgrade of the LHC.

The HL-LHC will collaborate with many types of industries and businesses to pursue its goals. Knowledge and technology to be developed during the HL-LHC project will make a lasting impact on society.



ILOS
ILOS Portal <#>

HIGHLIGHTS

10 Mar 2016
[HL-LHC is now part of the ESFRI Roadmap](#)
The 2016 Roadmap highlights the strong socio-economic impact of research infrastructures as well as their potential to generate innovation through collaboration with industrial partners.
[More information on the ESFRI Roadmap 2016](#) <#>

8 Feb 2016
[QUACO Open Market Consultation](#)
CERN, as member of the European pre-competitive procurement (PCP) instrument QUACO, is pleased to invite you to the Open Market Consultation (OMC) that will take place on 30th

Main Domains of Activity - HL-LHC Project

Work Packages

| | |
|---|--------------------------------------|
| Cryogenics systems | WP9 |
| Magnets components and assemblies | WP3, WP11 |
| Electrical equipments, electronics & instrumentation for accelerators | WP4, WP5, WP6A, WP6B, WP7, WP13 |
| Ultra High vacuum components and systems | WP12 |
| Collimators and new material resistsants to high temperatures | WP5, WP8, WP14 |
| Cryostats and subcomponents for cryogenic equipment | WP3, WP4, WP6A, WP9, WP11 |
| High precision assembling and manufacturing technologies | WP4, WP5, WP8, WP12, WP14 |
| Others | WP6A, WP10, WP15, WP16 |
| Raw materials | WP3, WP4, WP5, WP8, WP11, WP12, WP14 |
| Civil engineering and technical infrastructures | WP17 |

<http://project-hl-lhc-industry.web.cern.ch/content/main-procurement-needs-hl-lhc>



CERN "Shopping list"

Forthcoming market surveys and calls for tenders

Advance information on forthcoming market surveys and calls for tenders expected to exceed 200,000 Swiss francs.

In the line entitled Cost Range, a very rough indication of the cost range of the product is given in the form of letters **A, B, C, D**.

A represents items estimated at less than 750 kCHF, **B** represents items between 750 kCHF and 5 MCHF, **C** represents items between 5 MCHF and 10 MCHF and **D** represents items above 10 MCHF.

Firms may reply to the Market Survey published in the table below up to two weeks before the corresponding Invitation to Tender is sent out. Therefore, in case the deadline for replies indicated in the Market Survey cover letter is over, please send your reply to the Market Survey at the earliest possible date.

The countries of origin of supplies and services shall be [CERN Member States](#), except if provided otherwise in the table below.

References marked with "New" have been posted during the last 8 weeks.

| | | | |
|--|--|--------------------------------------|--|
| Search Menu | | Links Menu | |
| Type of Contract: <input type="text" value="All"/> | Market Survey dispatched: <input type="text" value="All"/> | Reference: <input type="text"/> | Call for Tenders scheduled for dispatch: <input type="text" value="All"/> <input type="text" value="All"/> |
| Activity Code: <input type="text"/> | Description and/or Specific Condition: <input type="text"/> | Requirement: <input type="text"/> | Commercial contact: <input type="text" value="All"/> |
| Cost Range: <input type="text" value="All"/> | Publication Date: <input type="text" value="From"/> <input type="text" value="To"/> dd-mm-yyyy | | |
| <input type="button" value="Search"/> | | <input type="button" value="Reset"/> | |

| Publication Date | Type of Contract | Reference | Requirement (Activity Code) | Description/Specific Condition | Cost Range | Market Survey scheduled for dispatch | Contacts and Interest in being contacted / Market Survey Documents | Invitation to Tender scheduled to dispatch |
|------------------|------------------|--|--|--|------------|--------------------------------------|--|--|
| 07-07-2016 | Supply | New MS-4212/SMB | Framework Market Survey concerning the provision of building refurbishment works at CERN (111) | The contract will cover construction works including interior refurbishment (e.g. partition ... <input type="button" value="Read More"/> The firms shall have a proven international competence and experience in ... | B | Second quarter 2016 | To express an interest please send an e-mail to procurement.service@cern.ch Technically: E. Perez-Duenas Commercially: C. Masoura | First quarter 2018 |
| 04-07-2016 | Supply | New IT-4245/IT | Supply of servers for physics data processing and infrastructure services (413) | CERN intends to place a contract for the supply of ... <input type="button" value="Read More"/> Interested firms must be ISO 9001 certified and be Intel Technology ... | D | Refer to MS-4165/IT | To express an interest please send an e-mail to procurement.service@cern.ch Technically: E. Bonfillou Commercially: F. Najeh | Third quarter 2016 |
| | | | Supply of a numerically controlled millino | CERN intends to place a contract for the supply of | | | To express an interest please send an e-mail to | |

<https://found.cern.ch/java-ext/found/CFTSearch.do>

Procedures for obtaining offers

- **Requirements < 10'000 CHF**

Users may issue enquiries directly provided CERN procurement rules are followed

- **Requirements > 10'000 CHF and < 200'000 CHF**

- Price Enquiries issued by Procurement Service
- Time for bidding 4 weeks; Invite 3 - 5 firms; if > 50'000 CHF sent to Industrial Liaison Officers (ILOs) for information
- Adjudication based on lowest offer (FCA price) which complies with all requirements, subject to the rules aimed at achieving well balanced industrial return coefficients for the Member States (from 100'000 CHF)

- **Requirements > 200'000 CHF**

Market Surveys & Calls for Tenders issued by Procurement Service



Requirements exceeding 200'000 CHF

- Announcement
- List of firms
- Market Survey
- Invitation to Tender
- Clarification Process
- Opening of bids – Basis of award
- Analysis of lowest bid or Best Value For Money ranking:
 - Price calculation ok?
 - Technical compliance?
 - All requested documents submitted?
 - Country of origin of bid?
 - Alignment rule?
- Contractual negotiation
- Contract



Country of origin

Supply contract: country(ies) in which the goods are manufactured or where the last major modification will take place. If at least 60% of the total amount of the bid comes from poorly balanced Member States, then the **whole bid** will be treated as that from a bidder in a poorly balanced Member State.

Service contract: country(ies) in which the bidder is established.



Basis of Award – Supply contracts

Supply contracts shall be awarded on FCA price,
«Lowest compliant bid » basis....

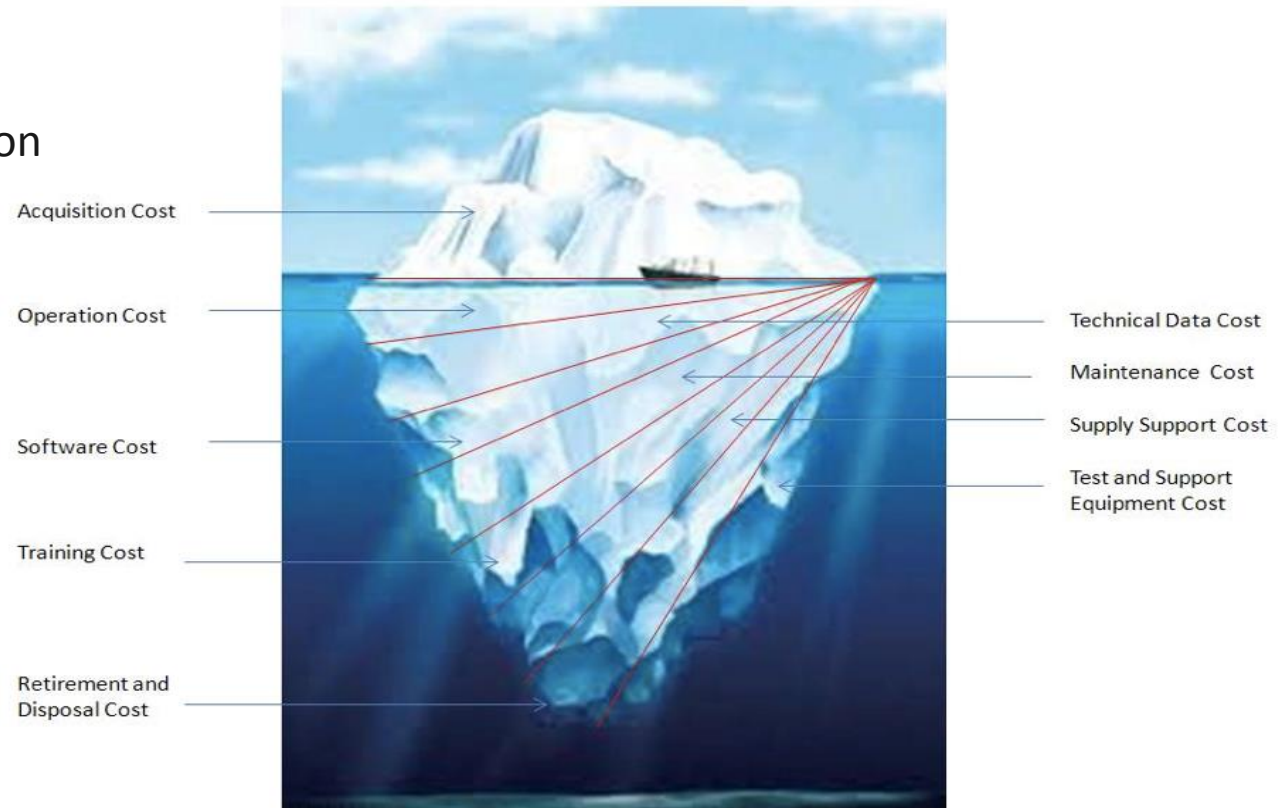


....and....

Lowest cost?

Takes into account:

- Initial investment
- Operating costs:
 - Energy consumption
 - Spares
 - Maintenance
 - Training, etc.
- Disposal costs



Basis of Award – Service contracts

Service contracts are awarded on a
«Best Value for Money» basis
to the bidder submitting
the most economically advantageous bid

Price // Quality

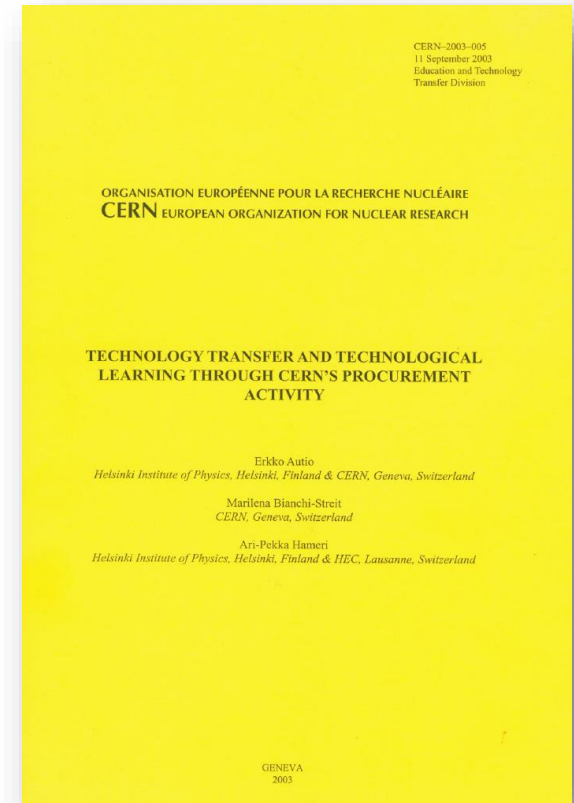
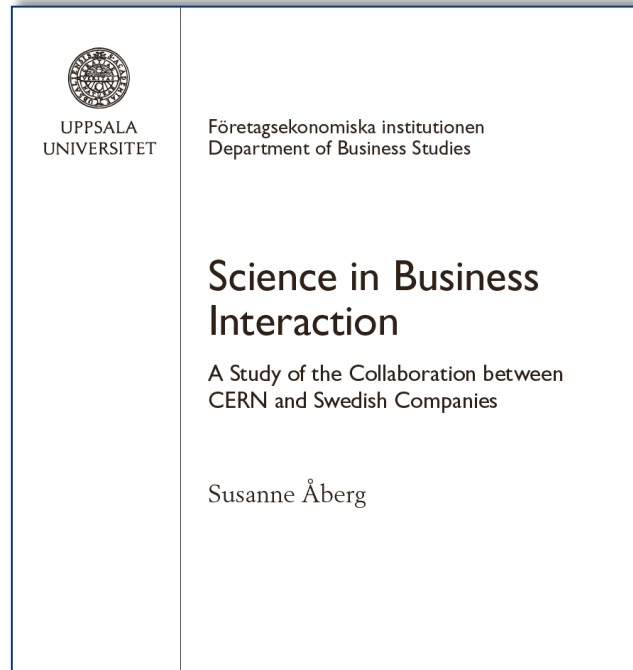
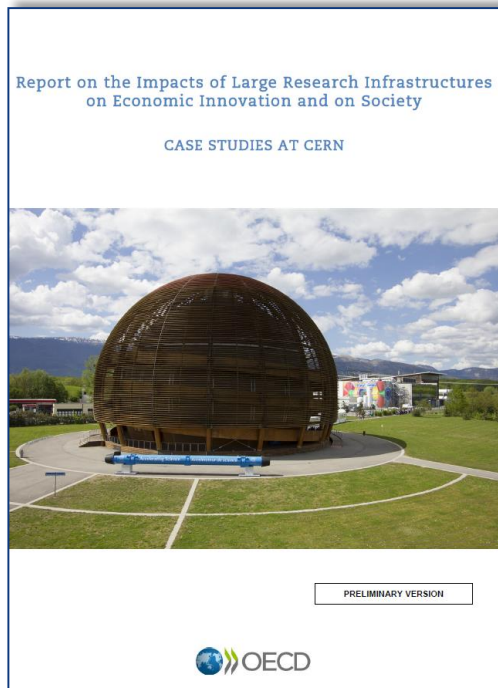
A diagram illustrating the relationship between Price and Quality. The word "Price" is written in orange, with a black arrow pointing downwards from its center. The word "Quality" is also written in orange, with a black arrow pointing upwards from its center. The two words are separated by a double slash "//".

Best Value For Money

The following criteria and weights will be applied by CERN to evaluate the bids for Service contracts:

| Criterion | Weight |
|--|------------|
| Price (inc. all relevant costs) | XX |
| Quality | XX |
| <ul style="list-style-type: none">▪ Experience of the key personnel▪ Stability of the personnel▪ External references▪ Technical know-how▪ Technical training▪ Quality of the bid▪ Tests▪ Etc. | |
| TOTAL | 100 |

Reports and studies



Study of the impact of CERN contracts on firms
Internship report, P. Fessia, 2001

Results of contracts with CERN

- 38% had developed new products
- 42% increased international exposure
- 44% improved technological learning
- 52% would have had poorer sales performance without CERN
- 17% opened a new market
- 60% acquired new customers
- all firms had derived great value from CERN as a marketing reference



Successful bidders and contractors



- Often small – medium sized and **flexible** firms
- Ensure **full** understanding of specifications – **exceeded** specifications may be **too expensive** (adjudication to lowest compliant bid for supplies)
- Communicate with CERN (problems, issues, alternatives, etc.)
- Take into account test requirements and documentation
- Make best offer directly
- Ensure good working relationship with partners and sub-contractors

Contacts with CERN

Procurement web page

<http://procurement.web.cern.ch/>

Industrial liaison Officers (ILO)



- DOING BUSINESS WITH CERN
- Doing business with CERN
- Procurement Strategy and Policy
- Code of Professional Ethics Extract
- Market Surveys and Calls for Tender
- Who to contact at CERN
- Who to contact in your Country
- Register for our Suppliers Database
- Law applicable to contractors' personnel
- Key Reference Documents
- Procurement Report
- Procurement for HL-LHC Project

- INFORMATION FOR CERN USERS, ILO'S AND PROCUREMENT GROUP MEMBERS
- Access using your CERN account

Welcome



The mission of the Procurement and Industrial Services (PI) group is to procure all supplies and services for CERN, meeting the specified and contractual technical, delivery and performance requirements at the lowest possible overall cost, while achieving balanced industrial return for the CERN Member States and respecting the CERN Procurement Rules.

The group monitors and reports procurement activities and statistics to the CERN management and member states.

The group also handles the organization's temporary labour requirements.

- NEWS
- Doing business with CERN
- Old Announcements

- DOING BUSINESS WITH CERN
- BROCHURE



- VIDEO
- DOING BUSINESS WITH CERN





