

Introduction to JRASRF

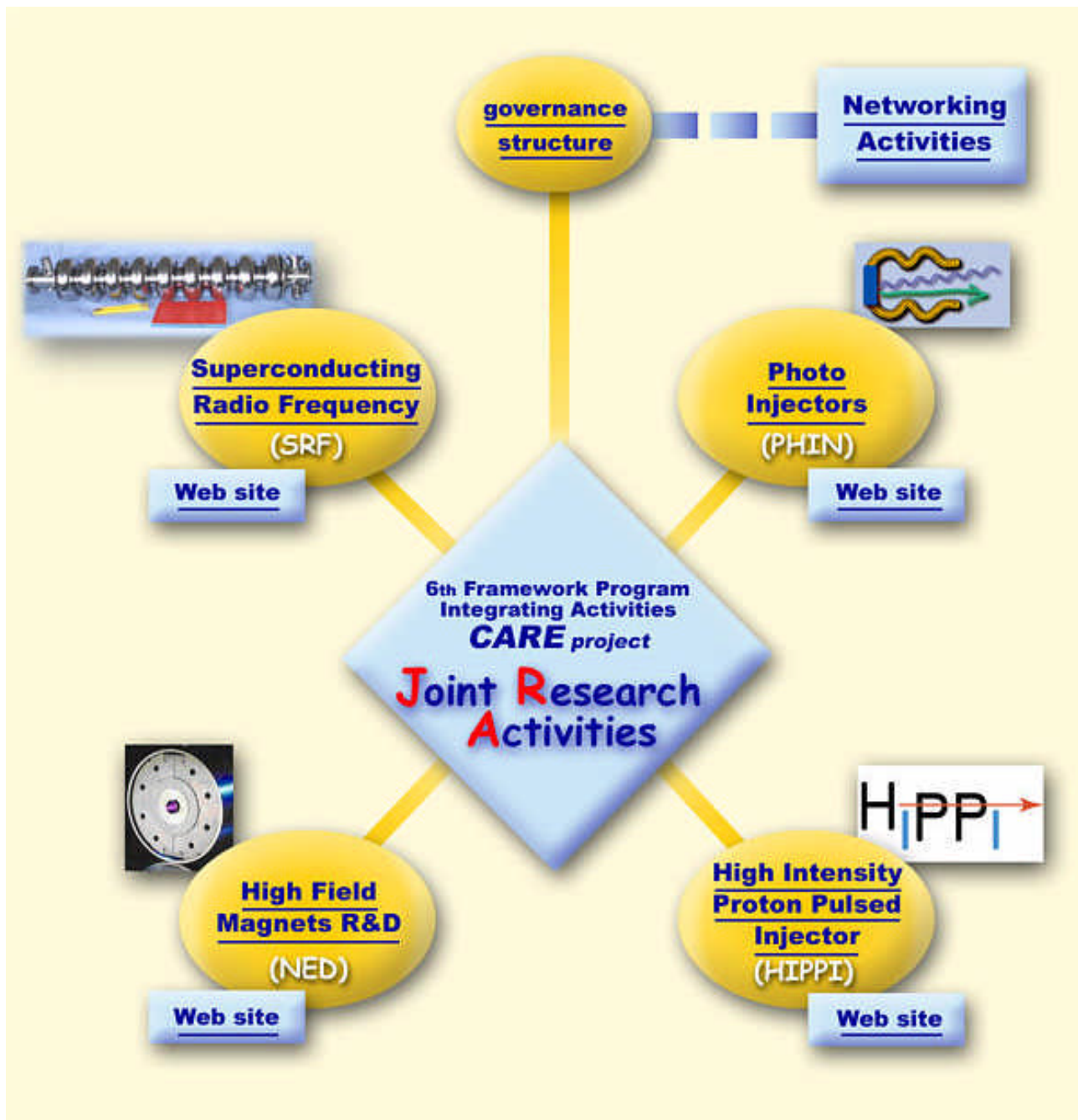
WP1 Management & communication



CARE

D.Proch

DESY, 3.Nov.04



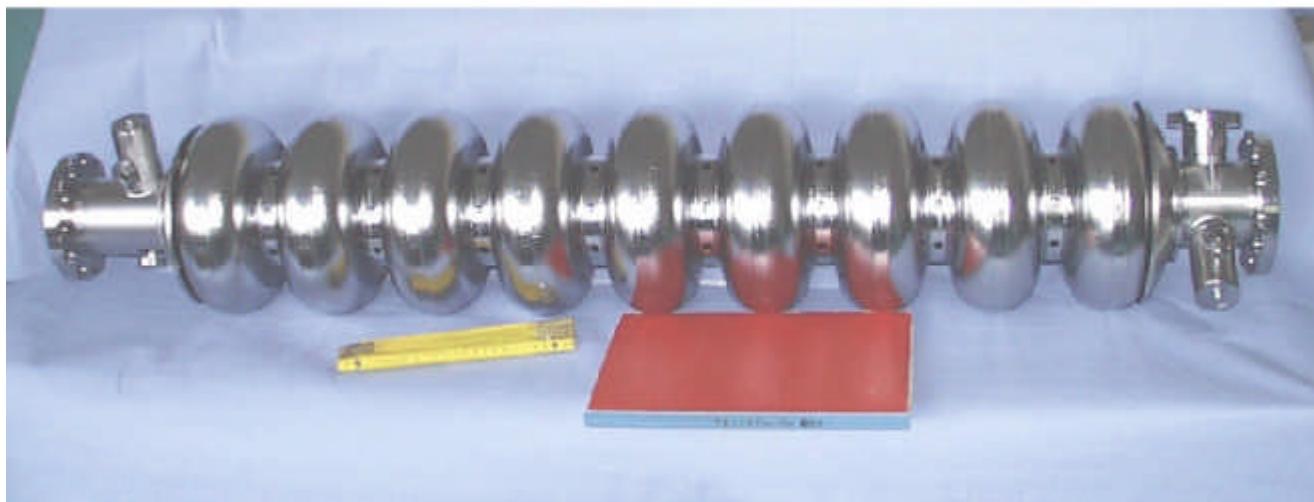
JRA1 (Joined Research Activity) **in the CARE**
(coordinated accelerator research in Europe) **proposal**

**Title: Research and Development on Superconducting
Radio-Frequency Technology for Accelerator Application**

Acronym: SRF

Co-Coordinator: D. Proch, DESY, T.Garvey, CNRS-Orsay

Deputy: H.Mais



SRF accelerator technology: R&D Subjects

- **High gradients** (close to the theoretical limit)
 - increase beam energy /shorten linac length
- **High Q value** (= low Rf loss)
 - Reduce cryogenic cooling power
 - Allow long pulse operation (CW)
- **Reliability of cavity and auxiliary components**
 - Availability of accelerator system,
- **Robust fabrication, preparation and assembly technology**
 - Reproducible component and system performance
 - Reduce cost of mass fabrication

Strategy of SRF- accelerator R&D inside I3 (integrating infrastructure initiative) of FP6

- **TTF (TTF-FEL) is an excellent accelerator test-bed for R&D on SRF accelerator technology**
 - Use /modify existing infrastructure (chemistry, clean room treatment, cryogenic installation, materials analysis,...) at partner laboratories to design and prototype new SRF accelerator components
- Install new components in TTF linac to :
 - **increase operational performance of TTF**
 - **establish improved technology for application at any existing or planned SRF accelerator**

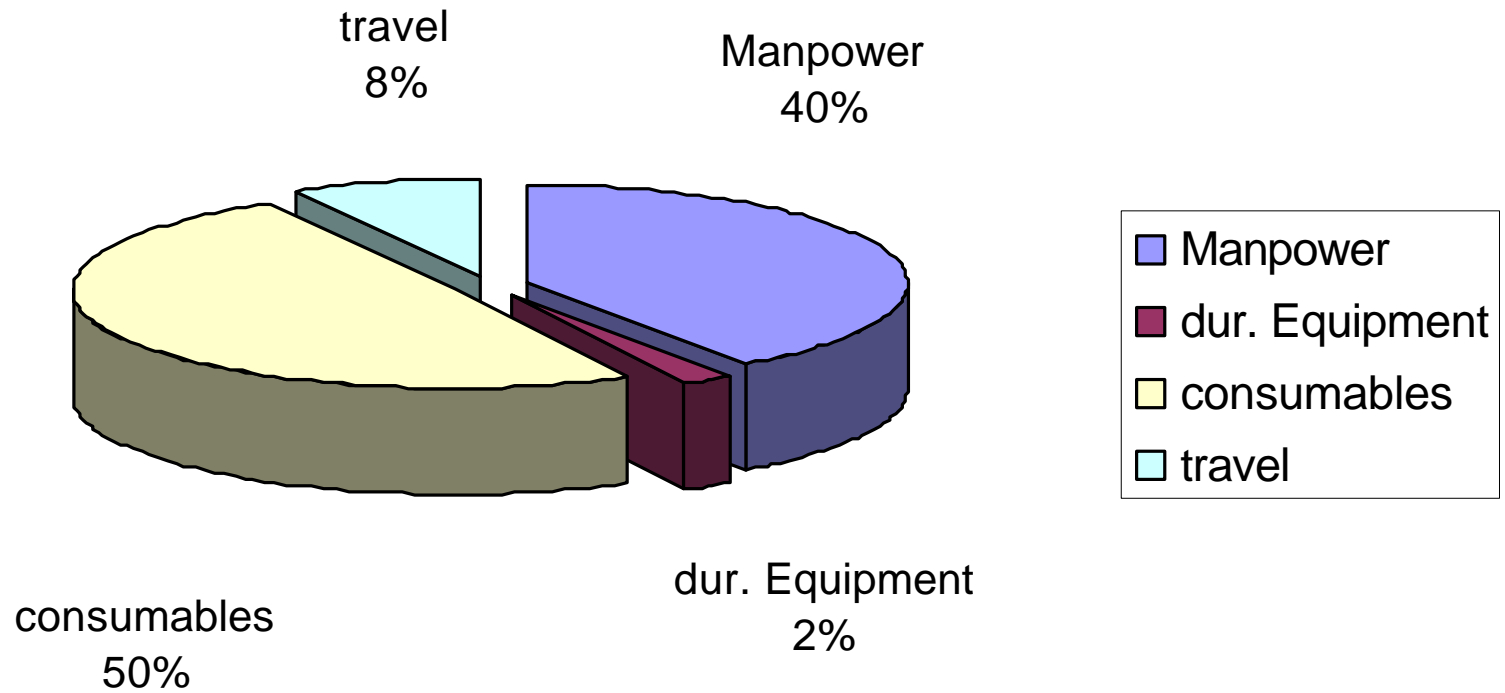
11 Participating Laboratories and Institutes:

Institute (Participating number)	Acronym	Coordinator
DESY (6)	DESY	D. Proch
CEA/DSM/DAPNIA (1)	CEA	R. Aleksan
CNRS-IN2P3-Orsay (3)	CNRS-Orsay	T.Garvey
INFN Legnaro (11)	INFN-LNL	S. Guiducci
INFN Milano (11)	INFN-Mi	S. Guiducci
INFN Roma2 (11)	INFN-Ro2	S. Guiducci
INFN Frascati (11)	INFN-LNF	S. Guiducci
Paul Scherrer Institute (21)	PSI	V. Schlott
Technical University of Lodz (14)	TUL	A.Napieralski
Warsaw University of Technology (16)	WUT-ISE	R.Romaniuk
IPJ Swierk (15)	IPJ	M. Sadowski

Associated industrial partners in JRASRF

Industrial involvement	Country
ACCEL Instruments GmbH	D
WSK Mess- und Datentechnik GmbH	D
E. ZANON SPA	I
Henkel Lohnpoliertechnik GmbH	D

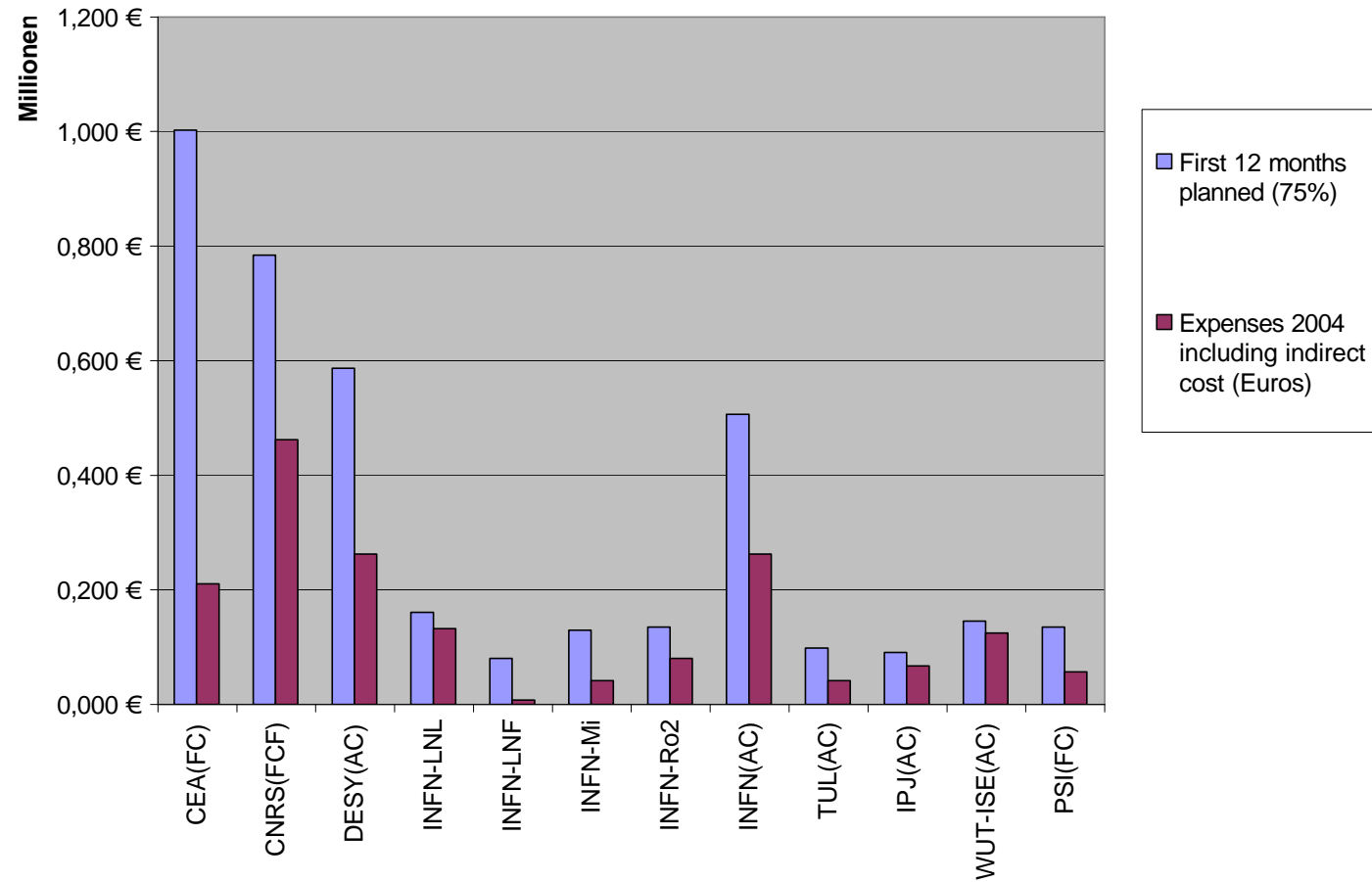
Breakdown of EU support (5 M€)



Status of JRA-SRF

- CARE started at 1. January 2004
- But EC support arrived in May (in July for Polish partners)
 - Resulted in some delay in investment and hiring non permanent staff
 - Has delayed schedule for only a few tasks
 - But spending of EC money is behind schedule

Planned and executed expenses in 2004



FC: Total planned and total executed budgeted

AC: Total planned and total executed EC budgeted

Financial issues

- **If EC money is not being spent in time:**
 - Money is not lost, but next EC support will be reduced by the left over money
 - Over all spending profile can be adjusted in order to spend the left over money at later time
 - If schedule stays behind, duration of JRA can be extended and residual money can be spent during extension.

JRASRF statistics

- Papers at Conferences 40
- Talks at Conferences 7
- Publications 1
- Meetings 25
- Report, Deliverable 1

Summary status JRASRF

- **Remarkable progress in all work-packages**
 - Despite some difficulties during the learning process of EC formalities
 - Some schedule delay because of late arrival of EC support, will be made up in the future
 - FTE's hired up to now (non permanent) : 16
 - Substantial support for travel