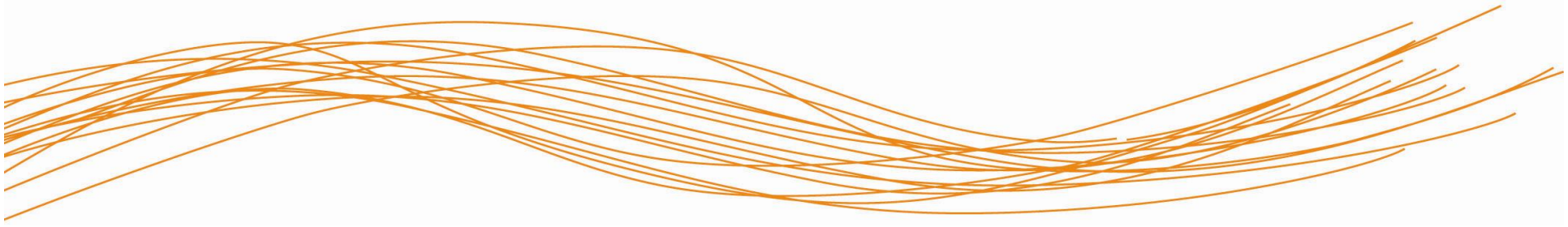
MeChanICs execution



MeChanICs kickoff meeting

September 2010

The 7 Partners

- Coordinator: **Helsinki Institute of Physics** (HIP), University of Helsinki (UH), Helsinki, Finland
- **CERN** European Organization for Nuclear Research
- **Veslatec** Oy / Tarkmet Oy, Vaasa, Finland
- **Mectalent** Oy, Oulu, Finland
- **Loval** Oy, Loviisa, Finland
- **Lewel Group Finland** Oy, Oulu, Finland
- **Metso Materials Technology**, Tampere, Finland

MeChanICs

• **FP7/People/IAPP** (Industry-Academia Partnerships and Pathways) project **MeChanICs**, “Marie Curie linking Industry to CERN”

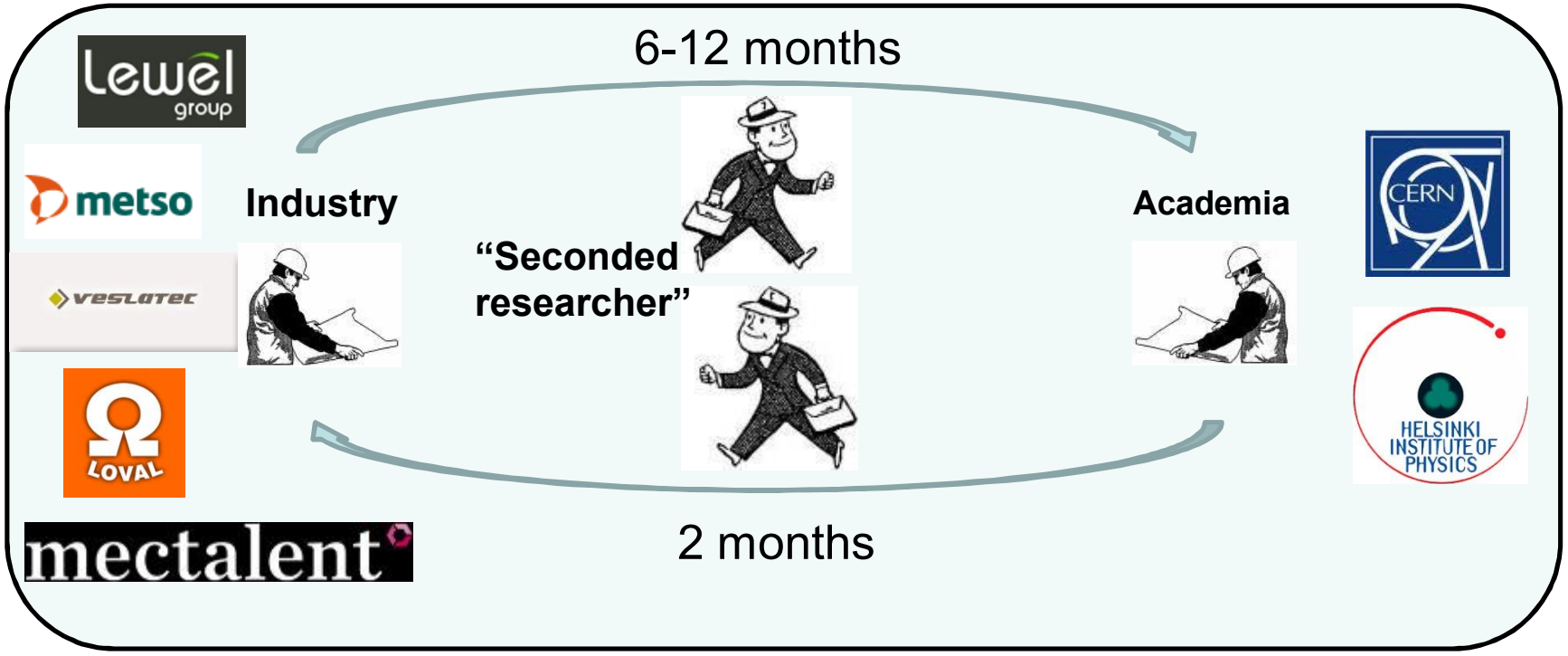
• start September 1st 2010, 4 year project

• budget: ~ 1 M€

• to enhance knowledge exchange btwn Partners on precision manufacturing by two-way intersectoral **secondments** and dissemination workshops

MeChanICs

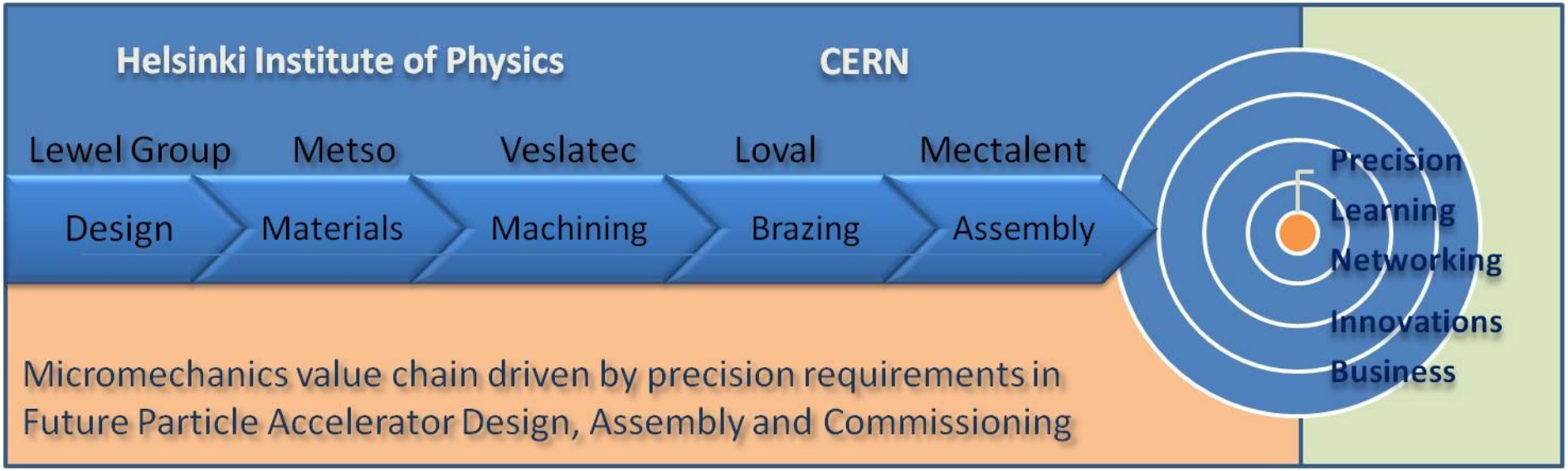
Enhance knowledge exchange by two-way intersectoral
industry-academia researcher secondments
(secondment period 2–12 months)



100 % coverage by EU funds

MeChanICs

- objective: enable & enhance long term industry participation in **CLIC**, Compact LInear Collider, **RF structure R&D**
- participation in each step of RF structure manufacturing



Work Packages

WP no.	Work package title	Lead beneficiary	Start month	End month
WP 1	**Design**	Lewel Group	M2	M25
WP 2	**Materials**	Metso	M14	M21
WP 3	**Machining**	Veslatec	M8	M22
WP 4	**Brazing**	Loval Oy	M25	M38
WP 5	**Assembly**	Mectalent	M34	M48
WP 6	**Project coordination**	UH	M1	M48

WP1: design

- CERN ↔ Lewel Group exchange of knowledge / provision of key information for CLIC RF structure & 2-beam module design work.
- increase understanding of requirements and possibilities of CLIC related 3D-design work.
- Lead beneficiary: Lewel Group, WP coordinator: Ulla Regelin

Task 1.1, CLIC test module development (from month 2 to 13)
A experienced Researcher from Lewel Group to CERN's RF structure production team to work on development/design work for the CLIC RF structures and 2-beam module.
Task 1.2, Secondment in Partner enterprise (from month 14 to 15)
A experienced Researcher from CERN to Lewel Group for knowledge exchange on CLIC requirement in precision assembly, RF applications and vacuum technologies.
Task 1.3, Post-doc researcher recruitment at CERN (from month 2 to 25)
A post-doc researcher to CERN's RF structure production team for design & machining studies for CLIC RF structures compatible with bonding and/or brazing techniques

WP2: materials

• CERN ↔ Metso exchange of knowledge / provision of key information relating materials for CLIC high precision assemblies.
• increase understanding of requirements and possibilities different materials.
• Lead beneficiary: Metso, WP coordinator: Jari Liimatainen

Task 2.1, CLIC materials research and development (from month 14 to 19)
A experienced Researcher from Metso to take part in material R&D for CLIC project. Work on CLIC RF components materials in collaboration with CERN metallurgy experts.

Task 2.2, Secondment in Partner enterprise (from month 20 to 21)
An experienced Researcher from CERN to Metso for knowledge exchange regarding CLIC requirements in materials and material treatment processes for RF components

WP3: machining

• CERN ↔ Veslatec/Tarkmet exchange of knowledge / provision of key information CLIC component manufacturing and design.
• increase understanding CLIC requirements and possibilities of manufacturing CLIC components with high accuracy.
• Lead beneficiary: Veslatec/Tarkmet,
WP coordinator: Ari Kärjenmäki

Task 3.1, CLIC test structure development (from month 9 to 20)
A experienced Researcher from Veslatec/Tarkmet to CERN's RF structure production team for development and research on high-accuracy RF component manufacturing.

Task 3.2, Secondment in Partner enterprise (during months 8, 15, 19 & 22)
An experienced Researcher from CERN to Veslatec/Tarkment for knowledge exchange regarding CLIC requirements and the reasons behind high accuracy components.

WP4: brazing

- CERN/HIP ↔ Loval exchange of knowledge / provision of key information CLIC high vacuum component brazing .
- increase understanding CLIC requirements and possibilities of different brazing technologies.
- Lead beneficiary: Loval, WP coordinator: Jorma Kallaperä

Task 4.1, CLIC test structure development (from month 27 to 38)
A experienced Researcher from Loval to take part in the design and testing of CLIC RF component brazing to understand the specific needs of the project and to provide expertise on the subject relating to vacuum brazing and special materials.

Task 4.2, Secondment in Partner enterprise (during months 25 to 26)
An experienced Researcher from HIP to Loval for knowledge exchange regarding CLIC requirements on brazing and assembly of high precision components.

WP5: assembly

CERN ↔ Mectalent exchange of knowledge / provision of key information regarding CLIC high precision assemblies.

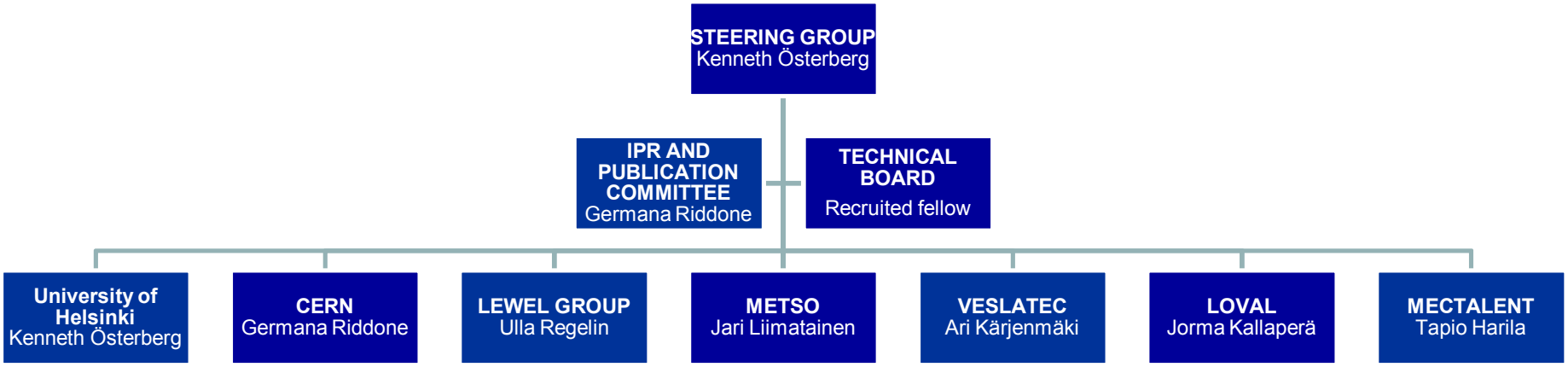
- increase understanding CLIC requirements and possibilities of high accuracy assembly techniques.
- Lead beneficiary: Mectalent, WP coordinator: Tapio Harila

Task 5.1, CLIC test module development (from month 35 to 46)
A experienced Researcher from Mectalent to CERN's RF structure production team for manufacturing and assembly of the CLIC RF structures and the 2-beam module.

Task 5.2, Secondment in Partner enterprise (during months 34, 41, 45 & 48)
An experienced Researcher from CERN to Mectalent for knowledge exchange regarding CLIC requirements in precision assembly and components.

WP6: coordination

• Objective: ensure effective project management and co-ordination, assure a proper execution of exchange of people, and to enable effective and timely exploitation, transfer and dissemination of knowledge based on project results.
• Lead beneficiary: University of Helsinki/Helsinki Institute of Physics, WP coordinator: Kenneth Österberg



WP6: coordination

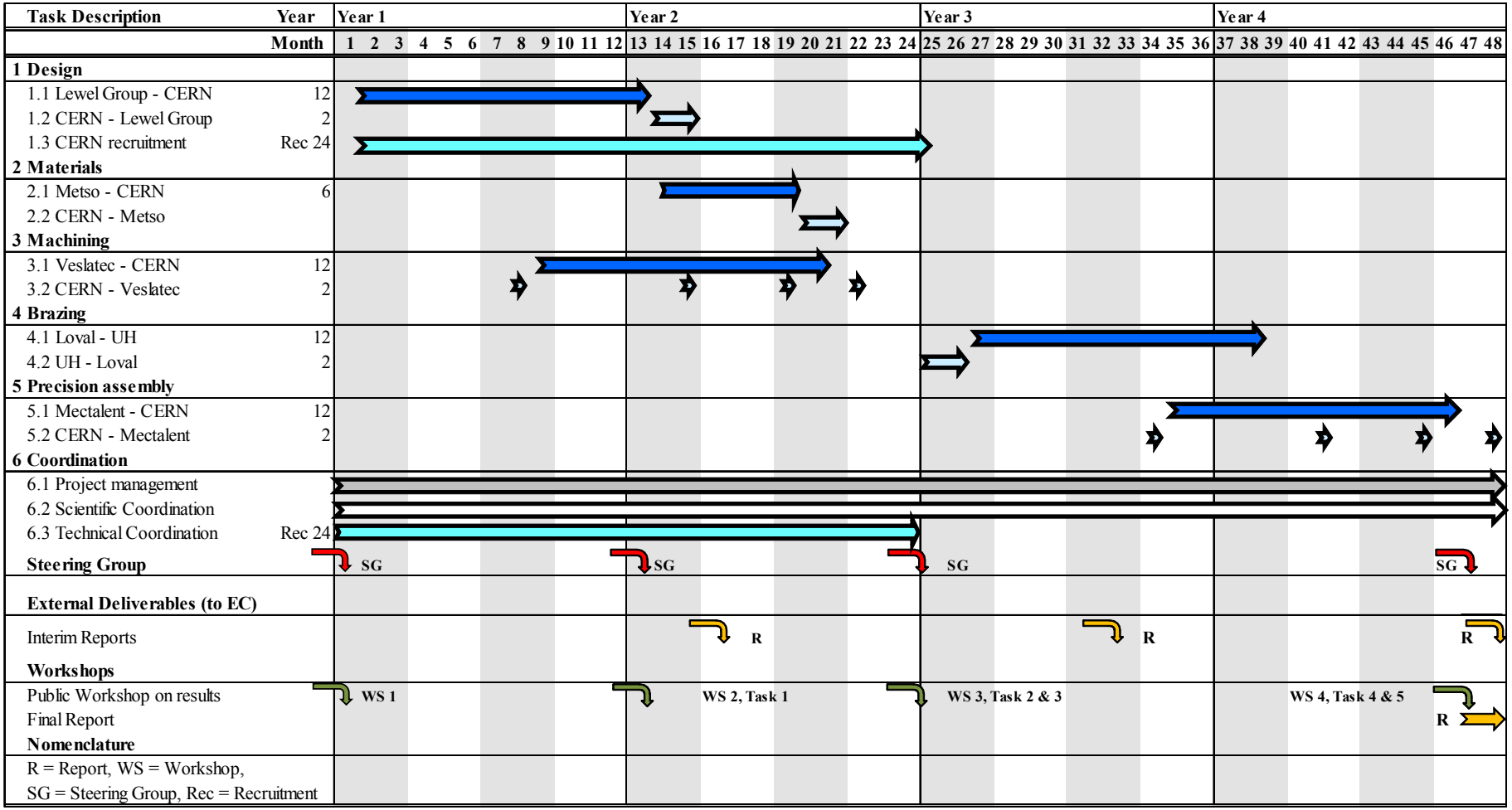
Task 6.1: Project overall management
Coordinator University of Helsinki will keep close contact with all Partners during project in order to ensure good conducting and compliance with the FP7 rules. Project managed by Project Coordinator, single point of contact EC ↔ consortium.

Task 6.2: Scientific coordination and monitoring
Main objective of Scientific coordination to ensure timely translation of CLIC developments during MeChanICs project into effective requirements for CLIC RF structures and therefore for MeChanICs project itself. Task managed by Scientific Coordinator, main point of contact CLIC ↔ consortium.

Task 6.3: Technical coordination
Technical Board oversee execution of IAPP MeChanICs project along guidelines provided by Steering Group. To ensure effective linking of developed technologies, a Technical Coordinator (TC) recruited to HIP to support the RTD development.

Thank you for your attention!

Mechanics overall schedule for secondments and recruitments



Secondments

Start dates will be decided together by seconded researchers, sending organisation and host organisation.

Tentative dates

Task	Seconded person	Start of Secondment	End of Secondment	N.B
1.1	Sweco, Pauli Piirainen	1.10.2010	29.9.2011	12 months
1.2	CERN, Luca Gentini	1.10.2011	30.11.2011	2 months
2.1	Metso, Janne Nurminen	1.11.2011	30.4.2012	6 months
2.2	CERN, to be confirmed	1.5.2012	30.6.2012	2 months
3.1	Veslatec, Aki Norrbacka	1.6.2012	31.5.2013	12 months
3.2	CERN, Said Atieh	1.5.2012	30.6.2013	2 months; 4 shorter visits
4.1	Loval, to be confirmed	1.12.2012	30.11.2013	12 months
4.2	HY, to be confirmed	1.9.2012	31.10.2012	2 months
5.1	Mectalent, Mikko Rissanen	1.7.2013	30.6.2014	12 months
5.2	CERN, Germana Riddone	1.6.2013	31.7.2014	2 months; 4 shorter visits