



ACTIPOLY

Active polyvalent packaging based on environmentally friendly fibre material

CORNET Monitoring Meeting

Dr. Martin Zahel, PTS Heidenau
Prague, 24.11.2016



Gefördert durch:



aufgrund eines Beschlusses
des Deutschen Bundestages





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The Need from the viewpoint of SMEs

Current situation

- Increasing demand for meat & meat products in EU (and worldwide)
- 1.3 bill t annually is wasted (Meat ~17%)

Consequences

- Waste of energy and resources
- Extensive unnecessary disposal

Solutions/Targets

- **Active packaging to extend shelf-life for packaging good**
 - Antimicrobial functionality
 - Eco-friendly packaging
 - Fiber-based packaging with barrier properties



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Project data

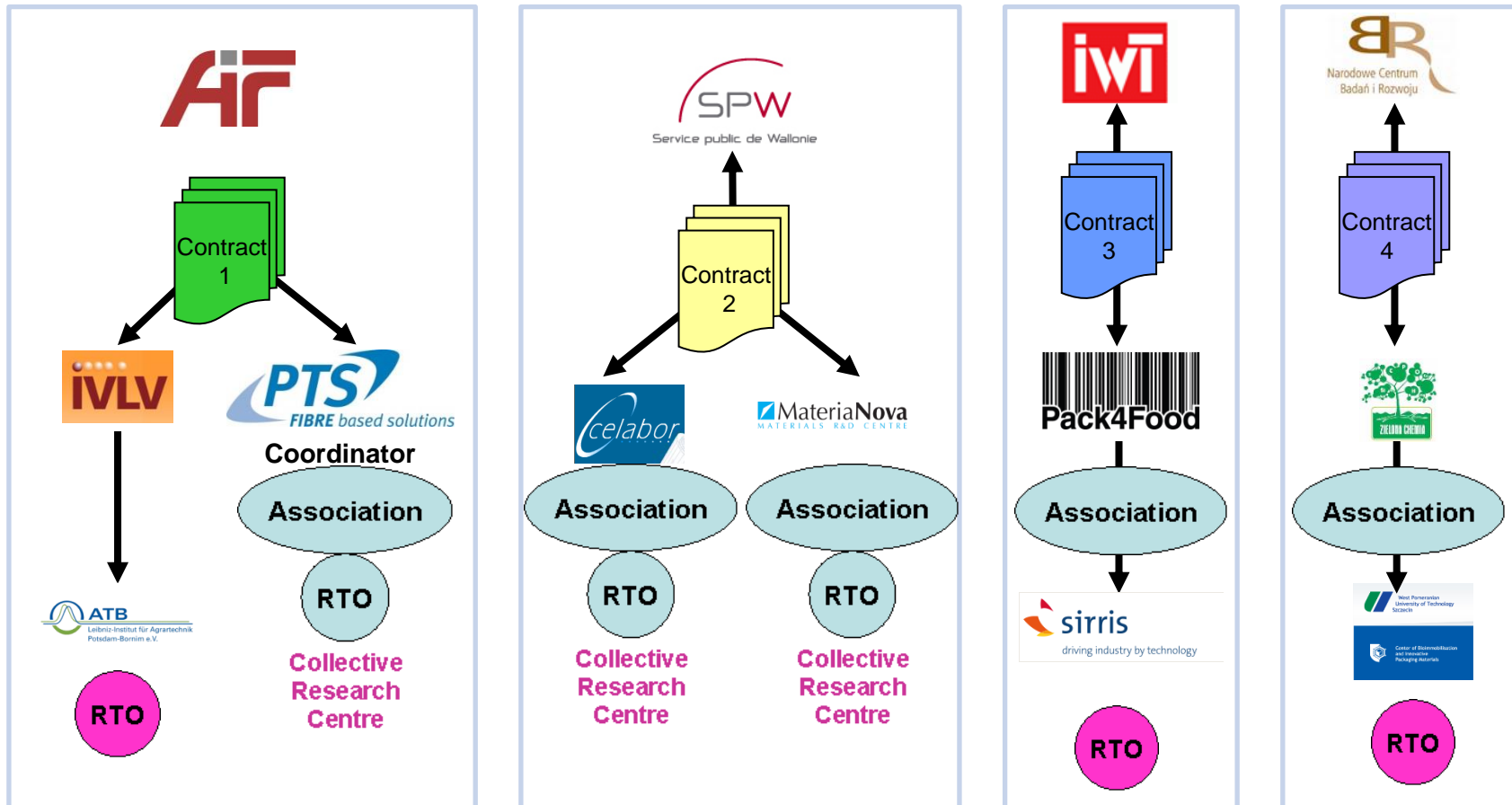
- Acronym: IGF 142 EGB: CORNET ACTIPOLY
- Title: ACTIVE POLYvalent packaging based on environmentally friendly fibre material with thermo-formable properties to extend shelf-life of fresh meat for the reduction of food waste
- Duration: 01.05.2016–31.10.2017 (Prolongation of 6 months included)
- Project Partners: Papiertechnische Stiftung (coordinator), CELABOR, The Association West Pomerian Cluster “Green Chemistry”, MateriaNova, Pack4Food VZW, Sirris, The West Pomeranian University of Technology Szczecin, Leibniz Institute for Agricultural Engineering (ATB)



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Consortium



CORNET funding by 4 respective agencies



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Objectives

Development of a multifunctional packaging tray for fresh food:

- Natural fibre based and thermoformable
- Sufficient barrier properties
- Antimicrobial functionality
- Sealable
- Recyclable and 100% based on renewable raw materials

Benefit for several market sectors:

**Food
Production**

**Food
Packaging**

**Papermaking
Industry**

**Chemicals
Supplier**

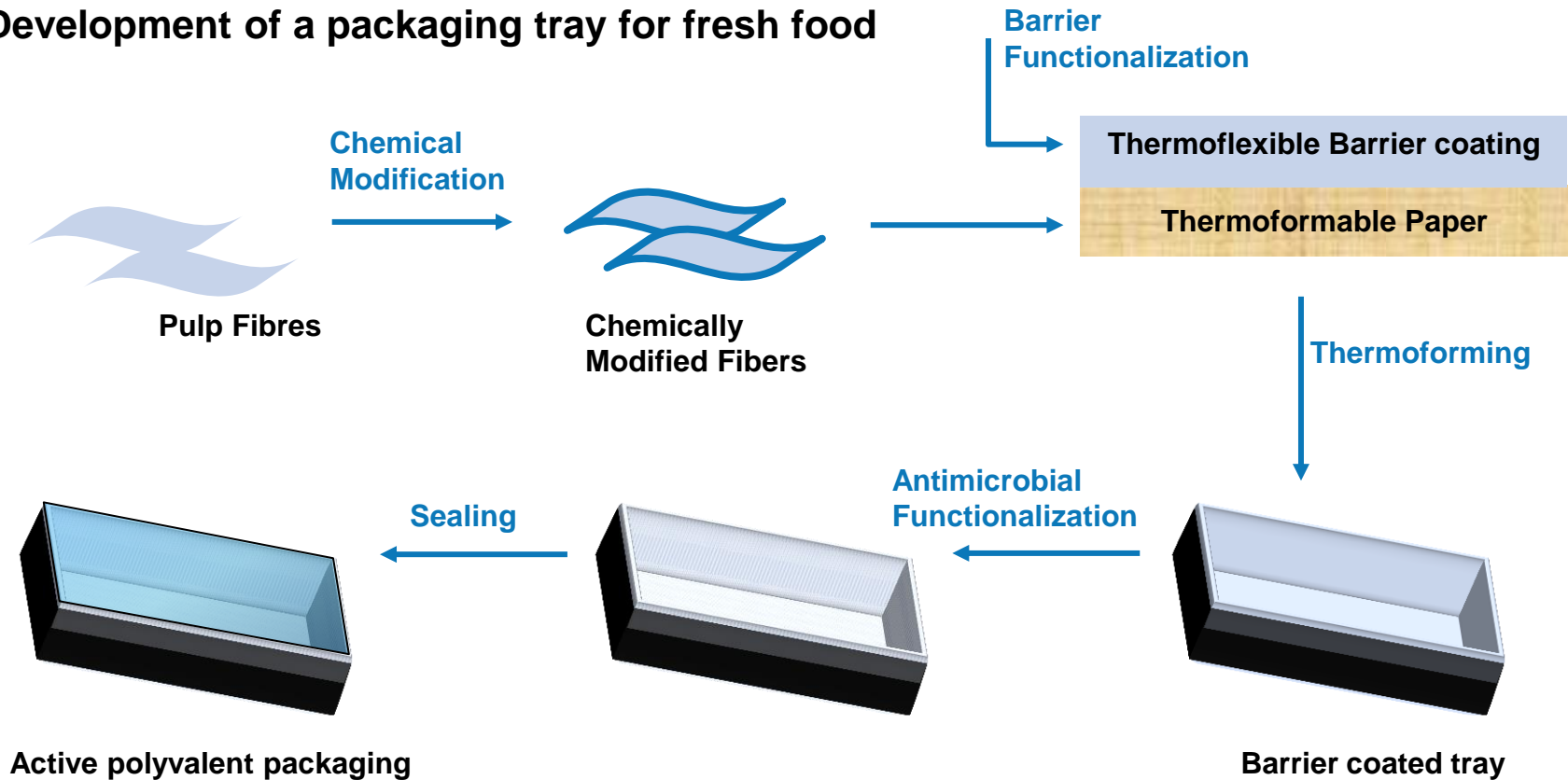


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Strategy

Development of a packaging tray for fresh food

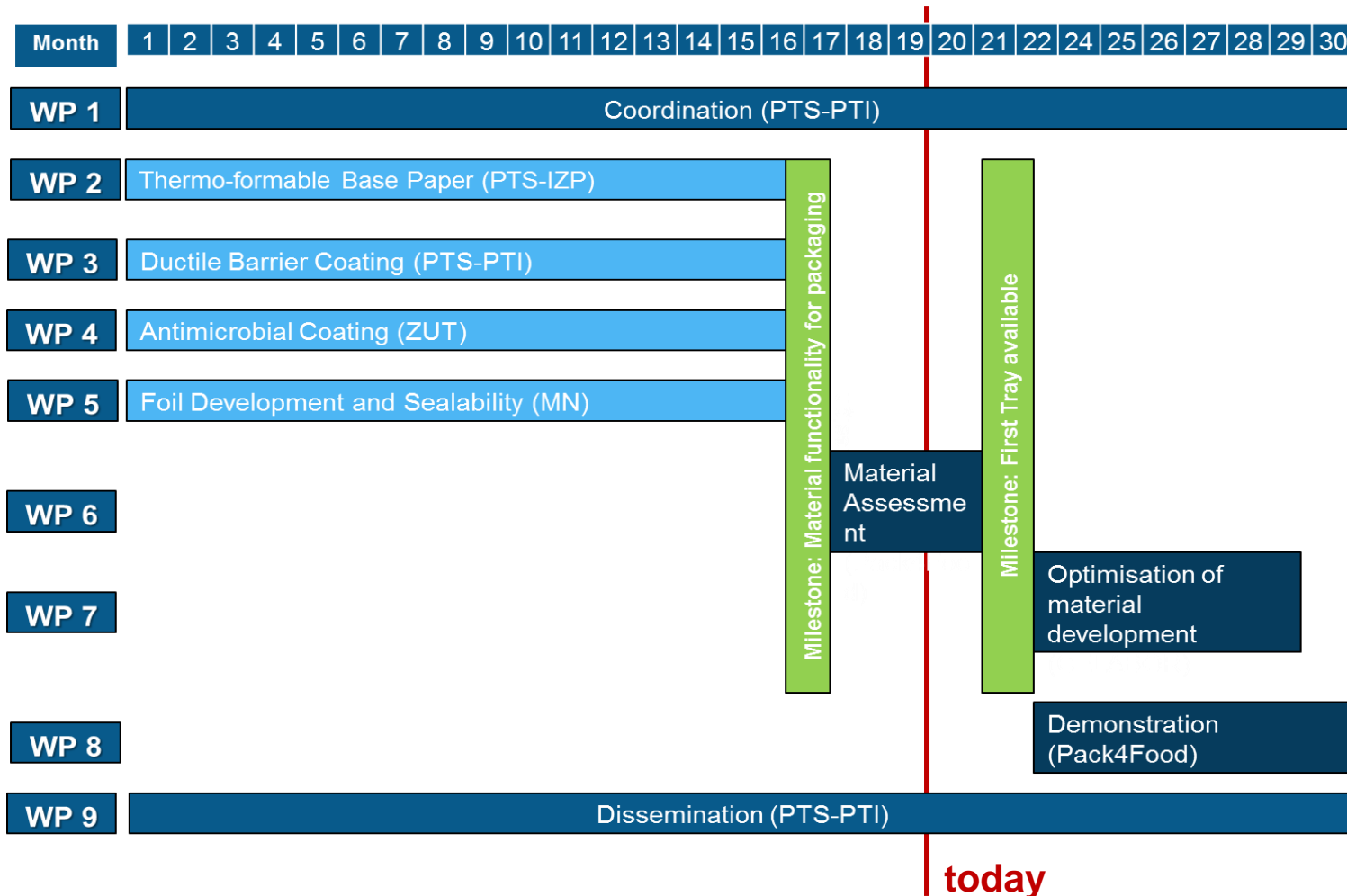




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Time shedule (6 months prolongation included)

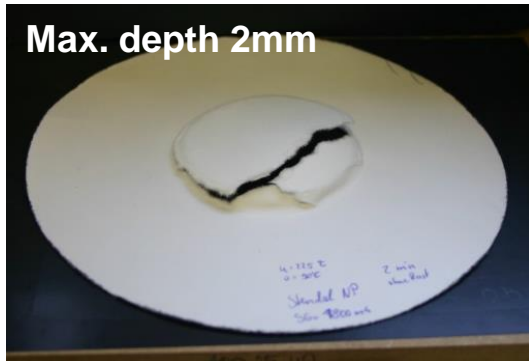


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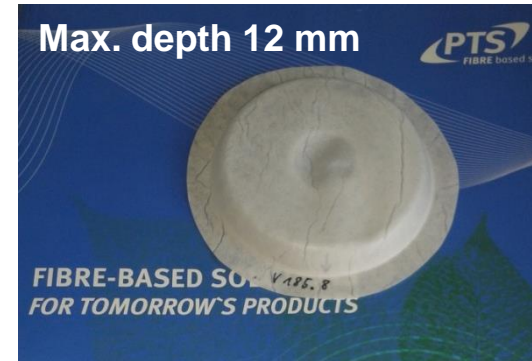
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Results

- Thermoformable base paper available



2-step chemical modification of pulp fibres



- promising preselection of suitable barrier coatings and application strategy

03	Ultralube E7096	15	465	-	68	stable	- / -	+
04	Ultralube MD2040	4,4	807	+	133	stable	- / -	++
05	Ultralube MD2300/50	23	281	+	105	stable	- / -	++
06	Solgum PP100	8,5	128	+	not def.	stable	- / +	++
07	Solcoat P150	94	78,6	+	not def.	decomp.	- / -	+
08	Product A	0,8	270	+	26 (2)	stable	- / -	+

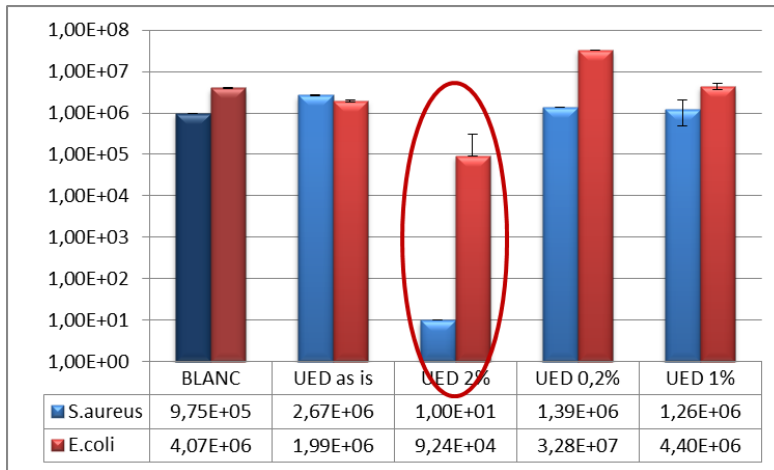
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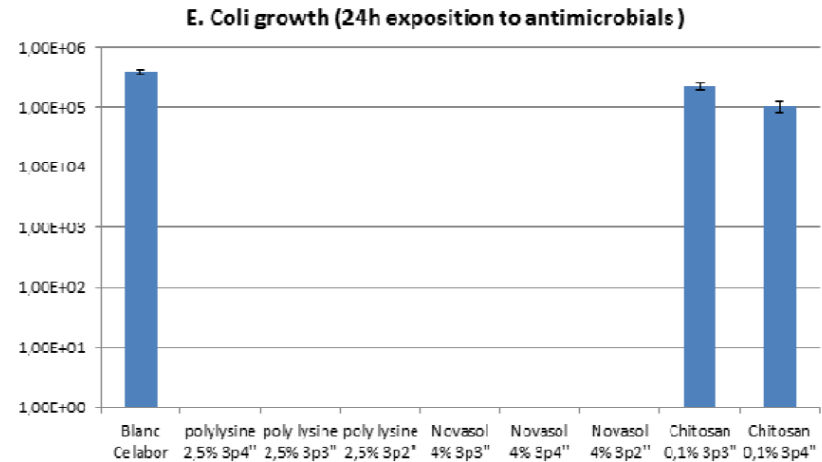
Results

- Antimicrobial properties could be provided via two different strategies

Superhydrophobic Coating



Antimicrobial Coating



- Tray sealing with biodegradable and antimicrobial polymer film still problematic due to low materials compatibility
- Data collection for LCA started

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Project Collaboration

- Monitoring of deadlines and deliverables
- Semi annual In-person steering committee meetings ensure a detailed view into the research activities of all project partners
- Phone conferences every 1-2 months allow fast response on collaboration issues and new options
- intensive exchange of “written data” (e.g. reports, tables, deliverables or meeting summaries) by the use of a SharePoint-server
- Periodic SME User Group Meetings guarantee a direct communication with small and medium enterprises in all participated project countries/regions



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User Committees (SMEs and non-SMEs)

Germany

- Mirontell fein & frisch AG
- Wiesenhof Pilzland
- ROX GmbH
- Maria Soell GmbH
- Loser Chemie GmbH
- M-Base Engineering + Software GmbH
- SKH GmbH

Belgium / Flanders

- La vie est belle
- Euralpack
- ViskoTeepak
- Packas
- BeNatural
- Avamoplast
- ANL Plastics
- Key Technology
- Roltex nv
- Paneltim nv

Belgium / Wallonia

- Belourthe
- DETRY s.a.
- GHL – Jean Gotta
- Pasta Della Mamma
- Omniform s.a.
- Pisciculture Mathonet Gabriel s.a.
- Yakima Chief
- Lemaître Plastics
- Symbiose Biomaterials
- Degen Emballages

Poland

- Ekopak – Plus Sp. z o.o.
- CDM Sp. z o.o.
- Drukpol.Flexo Sp. z o.o.
- Ekopak Sp. z o.o.
- GDR Sp. z o.o.
- HERSTA Spółka Jawna
- Zakłady Chemiczne „Nitro-Chem” S.A.



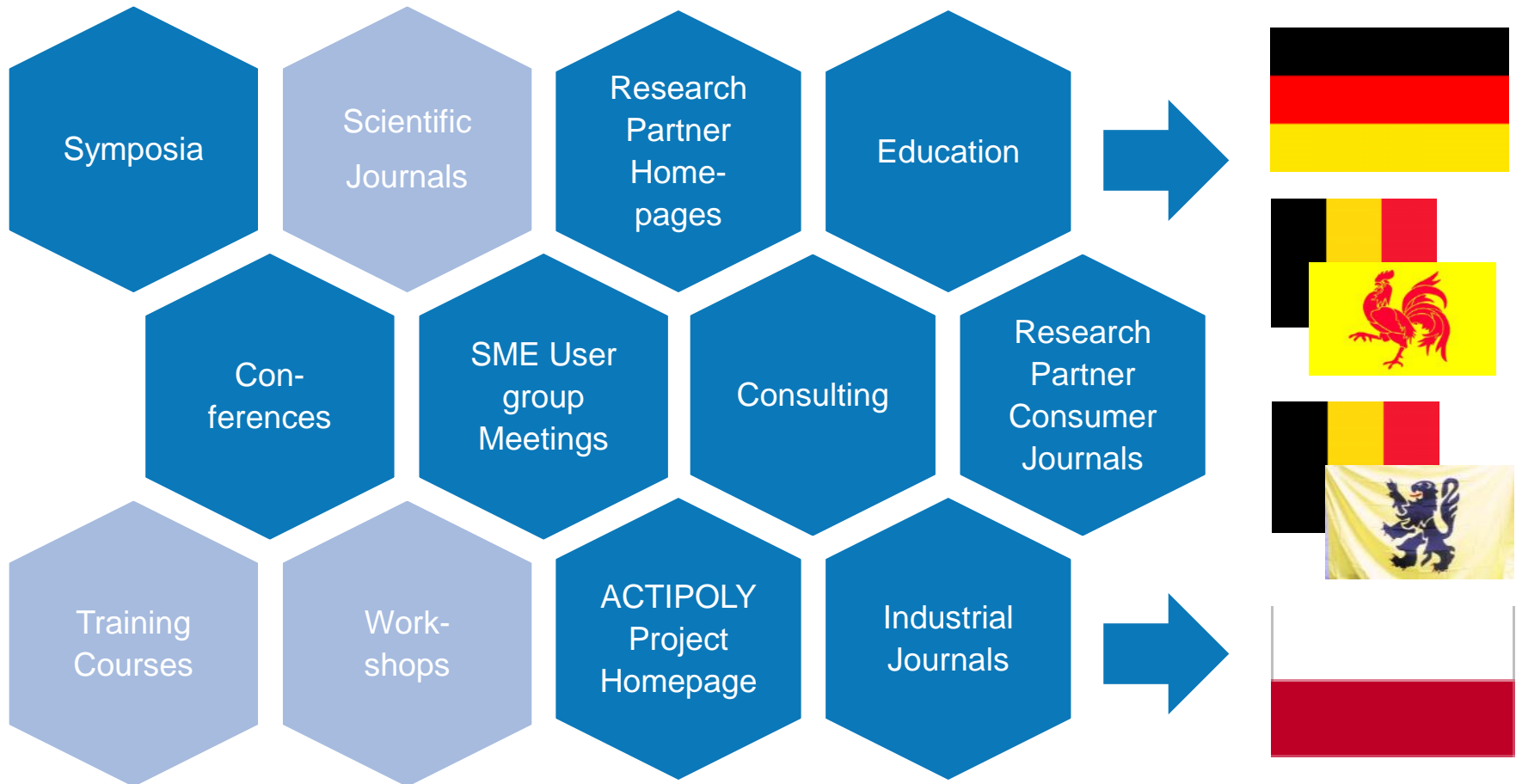
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Dissemination Activities

planned

realized



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Contact



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