

Experiences, challenges and results of Proof of Concept Program

Regional initiatives – examples and possible models for Proof of
Concept structures

Workshop on Proof of Concept in South Easter Europe

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Trieste, 22.09.2017



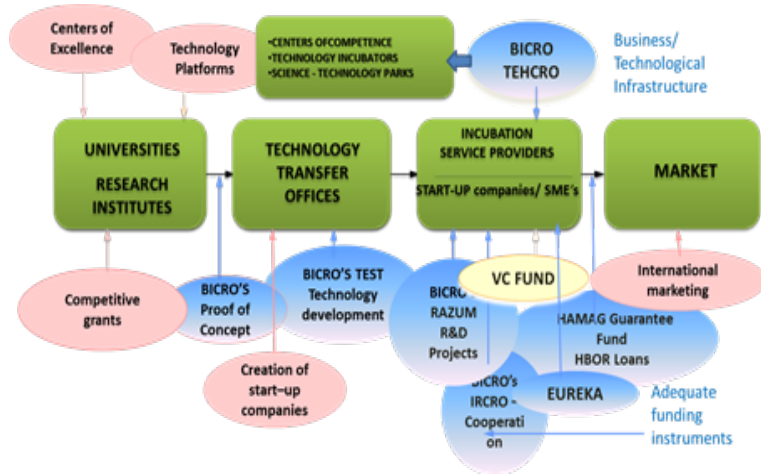
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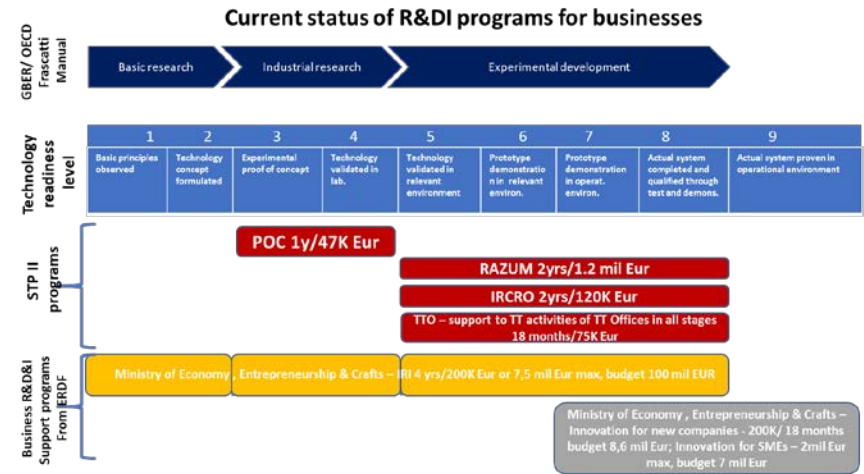


PoC in the context of innovation ecosystem

At the beginning of PoC



Now



PoC provides support to beneficiaries in proving their concepts and commercial potential, allowing them to bridge the financing gap and providing further support on their way to commercialisation within the innovation ecosystem

Key activities

- Functional prototype
- Technical demonstration
- IP check and protection
- Market analysis, commercialisation plan

Funding

- 5.000-50.000 EUR
- 12 months duration
- Physical persons, SMEs, public R&D organisation
- SMEs 60% / 70%
- Public R&D organisations 90%

Partners in implementation of PoC with both coaching and monitoring role
- participate in preselection, providing support in full application preparation, monitoring of projects and continue to provide support to beneficiary on the way to commercialisation



1. **CIRTT** TTO University of Zagreb
2. **SteP Ri** Science and Technology park Rijeka
3. **TPV** Technology park Varaždin
4. **TICM** Tehnology innovation center Međimurje
5. **TERA** Technopolis Osijek
6. **Utt Split** TTO University of Split
7. **METRIS** Center for material research Istria
8. **TPZ** Development agency Zagreb
9. **PCP** Entrepreneurship center Pakrac
10. **ZADRA** Development agency Zadar county
11. **IRB** Ruđer Bošković Institute
12. **BIOS** Entrepreneurship incubator Osijek



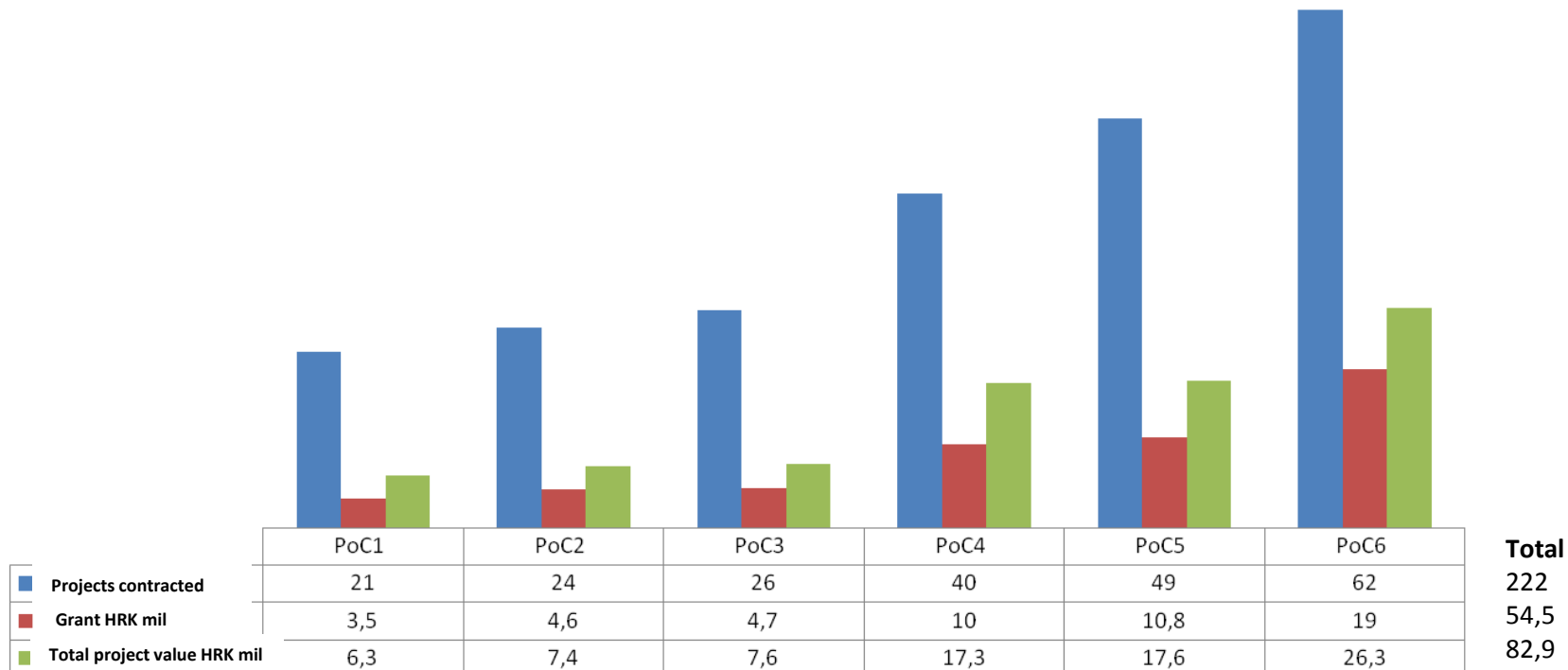


Key selection criteria

- Level of innovation
- Commercial potential
- Project quality (team, plan, risks,...)

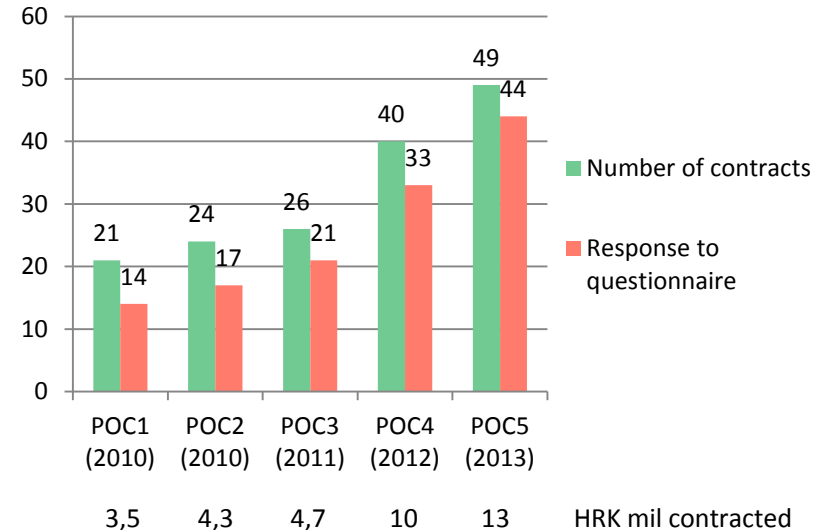


PoC from 2010 to 2016

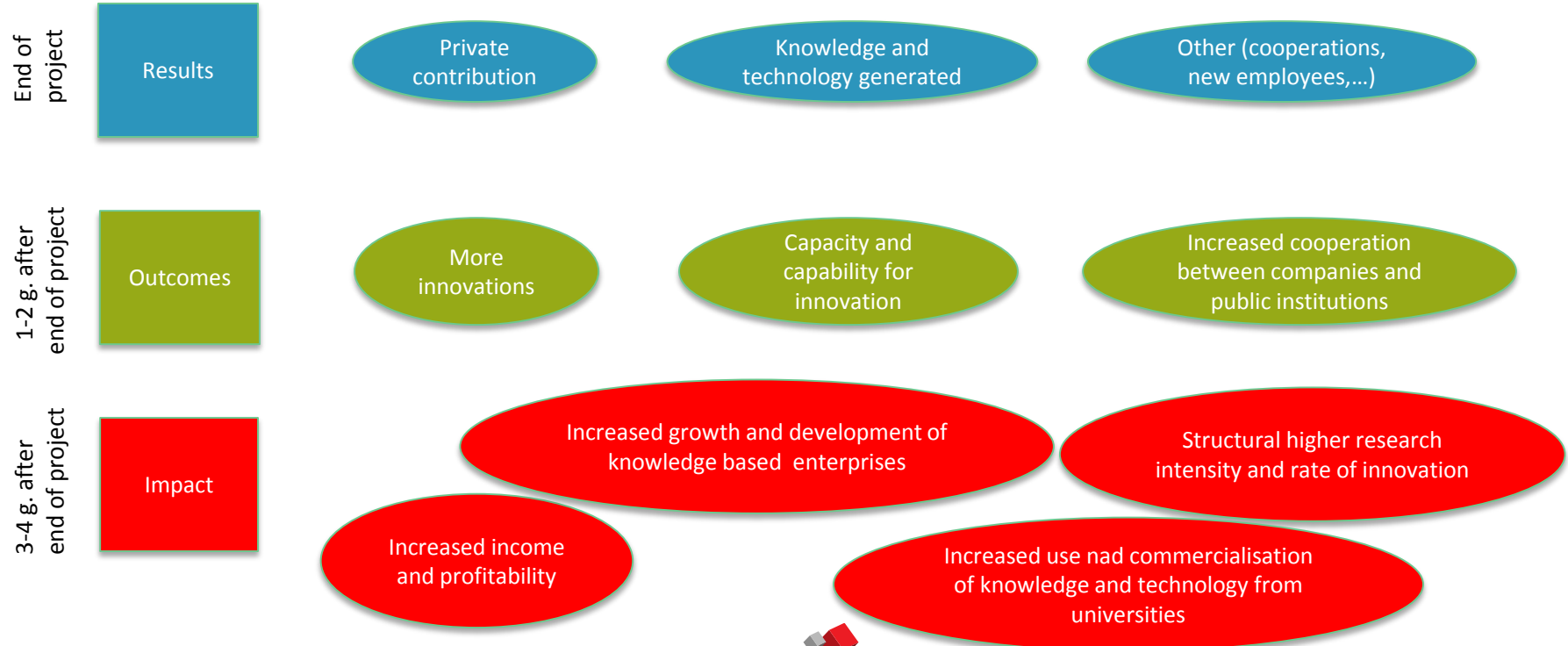


Based on 160 projects contracted with POC funds during period 2010-2013 a questionnaire based research on their impact was performed at the end of 2015

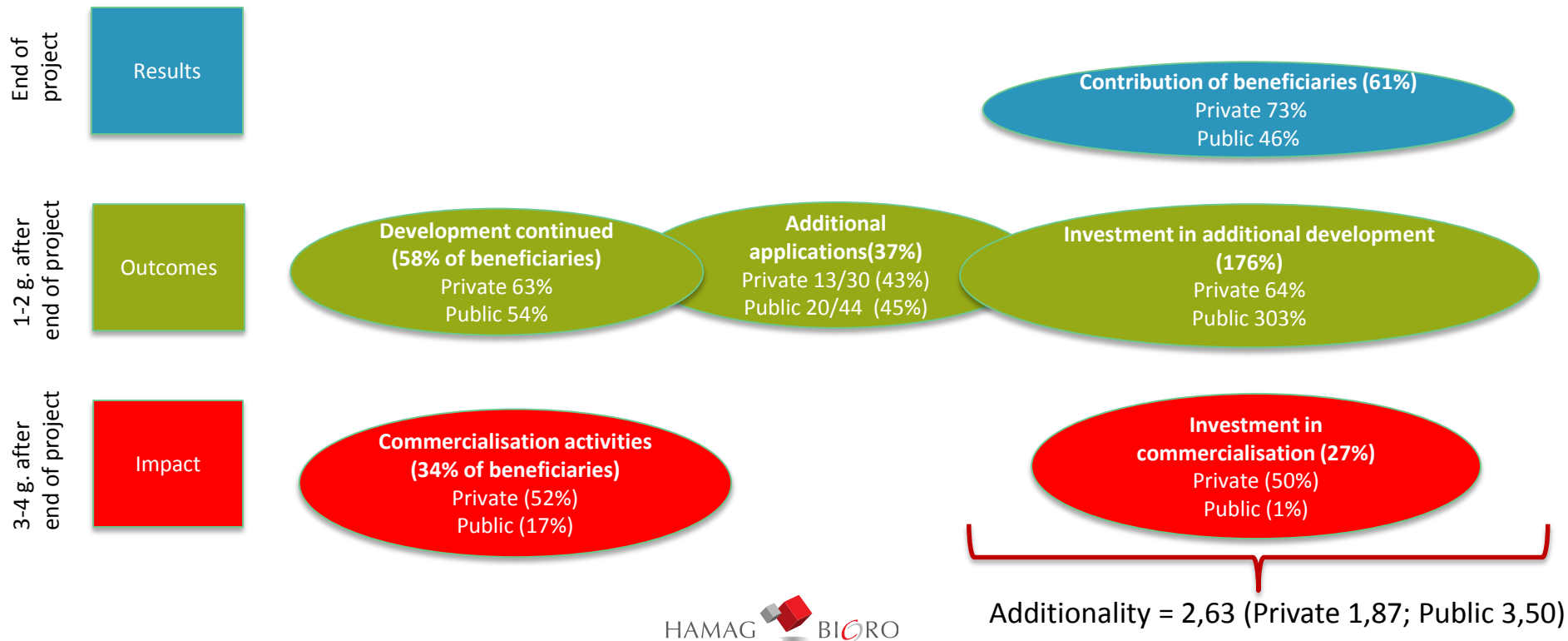
- October 2015-March 2016
- 129 (private 64 – 14,5 mil HRK/public 65 – 12,8 mil HRK) responses from 160 beneficiaries
- 75 different questions covering direct project results, outcomes and impact achieved after the end of each project



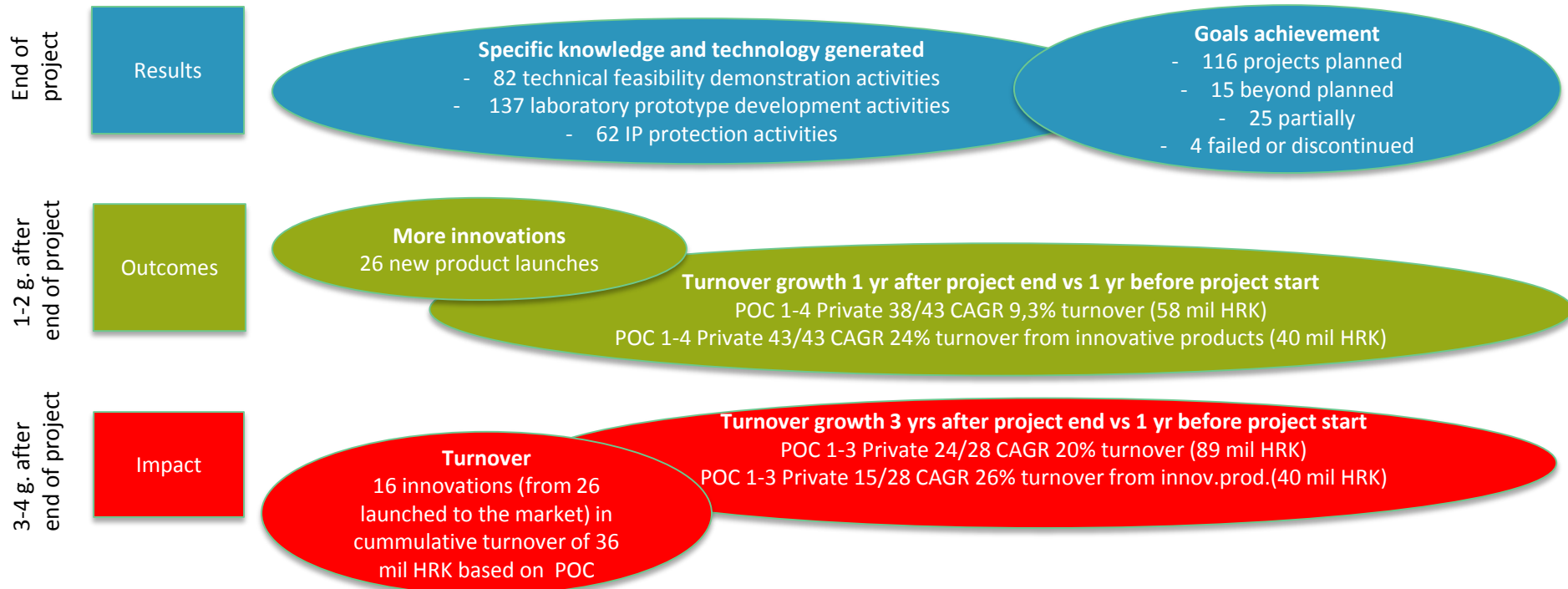
POC program logic



Most of the projects continued their development path. 37% of projects resulted in 74 applications for further financing with 45% of success rate. Almost 60% of financed projects performed additional development and 34% commercialisation activities.



Based on proved innovative concepts new technologies and 26 products were launched on the market which benefited competitiveness of beneficiaries.



New capacities and capabilities for innovation were developed.



End of project

Results

New employment
96 new employees in R&D from start of financing to 2015

Patent applications
40

Cooperations—average number of partners per project
Private 2,4 companies; 0,6 research instit.
Public 1 company; 0,8 research instit.

1-2 g. after end of project

Outcomes

Increased capacity for R&D 1 year after project end vs 1 year before project start
R&D expenditure POC Private 36/64 CAGR 8,9% (2,4 mil HRK)
R&D employees FTE POC Private 27/64 CAGR 13,6% (28)
R&D expenditure as % of turnover POC Private 33/64 at the level of 4,8%

3-4 g. after end of project

Impact

Growth and development of knowledge based enterprises
34% of respondents were companies younger than 3 yrs at time of application

Cooperations in further development—average number of partners per project
Private 1,2 companies; 0,3 research instit.
Public 0,6 companies; 0,9 research instit.

Intensity of R&D investments 3 yrs after project end vs 1 yr before project start
POC 1-3 Private 18/28 R&D expenditure CAGR 28% (11,4 mil HRK)
POC 1-3 Private 18/28 R&D expenditure as % of turnover from 9,3% to 12,5%

ACTIVITIES		Managing and operating grants: Awarded funds to 160 projects up to 350 000 HRK for POC projects (in total of HRK 34,68 mil. 88 POC Private projects funded with 19,793 mil and 72 POC Public projects funded with 14,888 mil		Additionality: POC Private 1,87 POC Public 3,5	
POC end of project	OUTPUTS POC 1-5	<u>Private contribution (129/160)</u> POC Private contributed additional 73% of program funds spent POC Public contributed additional 46	<u>Knowledge and technology generated (160/160)</u> 160 projects contracted (116 projects achieved objectives as planned, 15 yielded results beyond planned objectives, 25 achieved its objectives partially, 4 failed to reach its objectives or were discontinued). Specific knowledge and technology generated (82 technical feasibility demonstration activities, 137 laboratory prototype development activities, 62 IP protection activities , (Source: projects' final report) 40 patent applications submitted (129/160)	<u>Other outputs generated (129/160)</u> 12 development and 19 commercialisation strategies prepared (Source: POC impact survey) POC Public: 0,97 industry partners per project 0,83 research institutions per project POC Private: 2,36 industry partners per project 0,55 research institutions per project 96 new R&D employees during and after the project (66 Private, 30 Public)	POC Private: 0,73; Public: 0,46
Development phase after POC	OUTCOMES POC1-5 (129/160)	<u>More innovations</u> 58% of all projects financed started further development activities (Private 63%, Public 54%) Out of 129 projects analysed:44 started commercialisation activities, 26 launched innovation on the market (2 during project, 17 one year after project, 3 two years after project, 4 three years after project). Out of 26 launches beneficiaries identified there were: 22 product innovations, 9 service innovations, 13 technology, 7 process innovations, 5 business model and 5 marketing method innovations, 4 organisational method innovations.	<u>Capacity and capability for innovation</u> POC Private users achieved compound average growth (CAGR) one year after project end compared to one year before project start of: <ul style="list-style-type: none">9,3% in turnover (57,7 mil HRK; 38/43 from POC Private 1-4)24% of turnover from innovative prod. (40 mil HRK; 43/43 from POC 1-4)8,9% in R&D expenditure(36/64 respondents, 10 reported 0)13,6% in R&D FTE (27/64) 33/64 POC Private beneficiaries have maintained their R&D expenditure as % of turnover one year after project compared to one year before on level of 4,7-4,8% POC Private invested additional 64% of contracted funds in further development after POC and POC Public attracted additional 299% of contracted from other sources for further development	<u>Increased cooperation between companies and knowledge institutes</u> During additional development activities POC Public had: 0,6 industry partners per project 0,9 research institutions per project POC Private had: 1,2 industry partners per project 0,3 research inst. partners per project POC private users achieved CAGR of 30% of external R&D expenditure (year after compared to year before)(4/64)	POC Private: 0,64; Public: 3,03
Commercialisation	IMPACT POC 1-5 (129/160)	<u>Increased income & profitability (economic results)</u> 34% of all projects financed started commercialisation activities (Private 52%, Public 17%) 16 new products of POC Private users out of 26 launched new products developed as a result of POC achieved total cumulative sales of 35,6 mil HRK POC Private users achieved compound average growth (CAGR) three years after project end compared to one year before project start of: <ul style="list-style-type: none">20% in turnover or 88,5 mil HRK in absolute numbers (24/28 from POC 1-3, 18 out of 24 demonstrated growth)26% of turnover from innovative products or 39,7 mil HRK in absolute numbers (15/28 from POC 1-3)	<u>Increased growth and development of knowledge based enterprises</u> For 22 POC Private projects out of 64 respondents (34%), applicants were companies younger than 3 yrs at time of application	<u>Increased use and commercialisation of knowledge and technology from universities</u> 11/65 projects started some commercialisation activities 1 licensing agreement signed POC Public invested additional 1% of funds in commercialisation	POC Private: 0,5; Public: 0,01
			<u>Structural higher research intensity and rate of innovation</u> POC Private attracted/invested additional 50% in commercialisation POC Private users achieved growth three years after project end compared to one year before project start of: <ul style="list-style-type: none">CAGR of 28% or 11,4 mil HRK in their R&D expenditure (18/28 from POC 1-3)R&D expenditure as % of turnover (18/28 from POC 1-3) from 9,3% to 12,5%		



Overview
of impacts
achieved
according to
POC program
logic



Final remarks

- Knowledge development
- Additionality
- Public vs private
- Pipeline creation
- Innovation ecosystem
- Continuity

Thank you for your attention!



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