

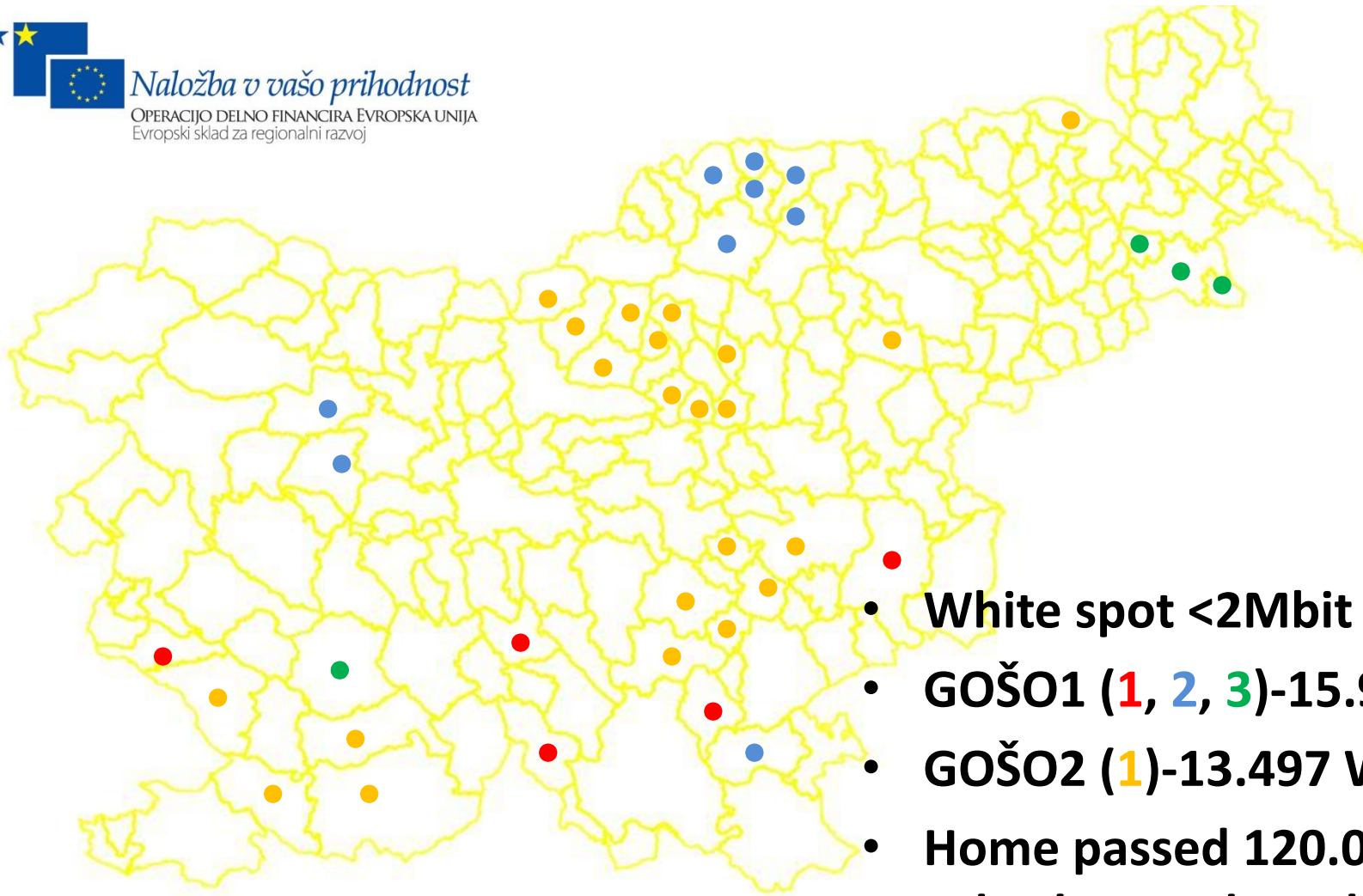
Common myths, truths and fears that need to be overthrown when deciding about rural broadband projects



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OAN in Slovenia



- White spot <2Mbit
- GOŠO1 (1, 2, 3)-15.921 WS
- GOŠO2 (1)-13.497 WS
- Home passed 120.000 in suburban and rural areas

Myths, truths, fears

Myth – any broadband is good!

Truth – FTTH is expensive!

Fear – there will be low interest for broadband in rural areas!

Fear: Take-up rate

- 300 properties passed, ~150 connected by end of month (Barry Forde, FTTH Forum, London 2013, Broadband for the Rural North Ltd www.b4rn.org.uk)
- In new developments, even when copper is installed in parallel, the take rates for fiber are very high, in the 60-70% range. In social housing, the take-rates can reach 30-50% in less than a year (depending on pre-existing contracts signed by tenants) (Benoît Felten , FTTH Forum, London 2013, THE BENEFITS OF FIBER BROADBAND FOR THE REAL-ESTATE MARKET)

OAN Take-up rate in Slovenija

Take-up rate – OAN monthly (3 years)

THE RELATIVE UTILITY OF BROADBAND TO RURAL AREAS IS MUCH BIGGER THAN TO URBAN AREAS! IT IS CRITICAL TO ASSURE AS MUCH SERVICE PROVIDERS AS POSSIBLE - SERVICE IS THE KEY! IN RURAL AREAS, COOPERATION WITH LOCAL INHABITANTS AND LOCAL AUTHORITIES IS A MUST!

Operacije GOŠO 1	municipalities	2011	31.3.2014	Percent
TOTAL GOŠO 1	20	15.957	9.760	61,16%
Operacije GOŠO 2	No. municipalities	White spots start 2013	Connected WS 31.3.2014	Percent
TOTAL GOŠO 2	23	13.497	3.168	23,47%
TOTAL GOŠO 1 AND GOŠO 2	43	29.454	12.928	43,89%

Truth: FTTH is expensive

Fiber projects can have a higher initial investment, but if total cost is considered, they might be already the most convenient!

The initial investment can be heavily lowered (more than halved) if the reuse of existing infrastructure and the concurrent execution of works with SGEI is possible (EU regulation).

As fiber brings much lower operational costs, on long term (20years) the projects are less sensitive to economic environment.

Why everyone says FTTH is too expensive for rural areas?

Infrastructure investments are not meant for fast payback!

If someone wants to be a real infrastructure provider, then equity (like) capital must be invested in rural areas!

Equity requires ROE, and not ROI! The initial investment must produce long term adequate return, but not repay itself (it is an investment for a long, undefined time).

Equity will not be withdrawn from the operation.

Fiber is misunderstood as too expensive because of improper investment source!!

Cost per HH passed and cost per HH connected?!

Example: OŠO projects in Slovenia

An area with more than 100.000 HH was covered (mostly FTTH, with fiber connectivity 200m or less from the HH), using total of 110M EUR (PPPs, with 81M EU and national funds), 29.000HH out of those 100.000 did not have access to 2 Mbps (clear market failure). At the moment, 13.000 of those are connected.

How much did we spend per HH?

110M/13k? 81M/13k? 110M/29k? Or 110M/100k?!

Myth: any broadband is good!

- For every one percentage point increase in broadband penetration in a state, employment is projected to increase by 0.2 to 0.3 percent per year. *Source: The Effects of Broadband Deployment on Output and Employment: A Cross-sectional Analysis of U.S. Data. Robert Crandall, William Lehr and Robert Litan, the Brookings Institution, 2007*
- An increase in the broadband penetration rate by 10 percentage points raises annual growth in per-capita GDP by 0.9 to 1.5 percentage points. *Source: Broadband Infrastructure and Economic Growth, 2009. Nina Czernich Oliver Falck, Tobias Kretschmer and Ludger Woessmann*
- According to the U.S. Department of Commerce, between 1998 – 2002 communities that gained access to broadband service experienced an employment growth increase of 1% to 1.4%, a business establishment increase of 0.5% to 1.2%, and a rental value increase of 6%

It does good, but....

Key findings

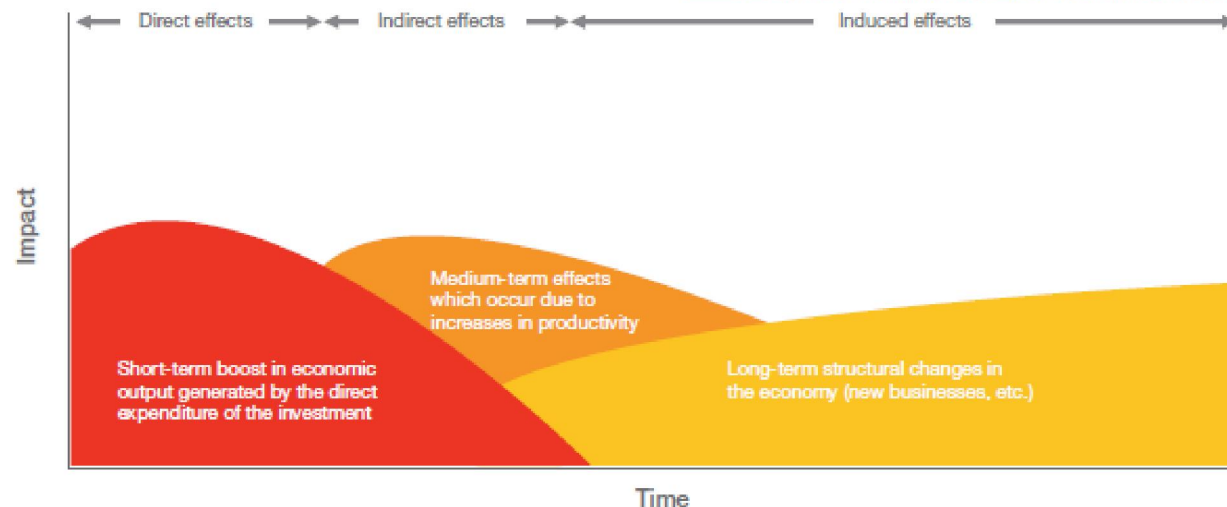
> Doubling broadband speeds for an economy can add 0.3 percent to GDP growth, in a simulation relative to the base year 2008

> The benefits of faster broadband can be categorized as:

Increased innovation

Access to services

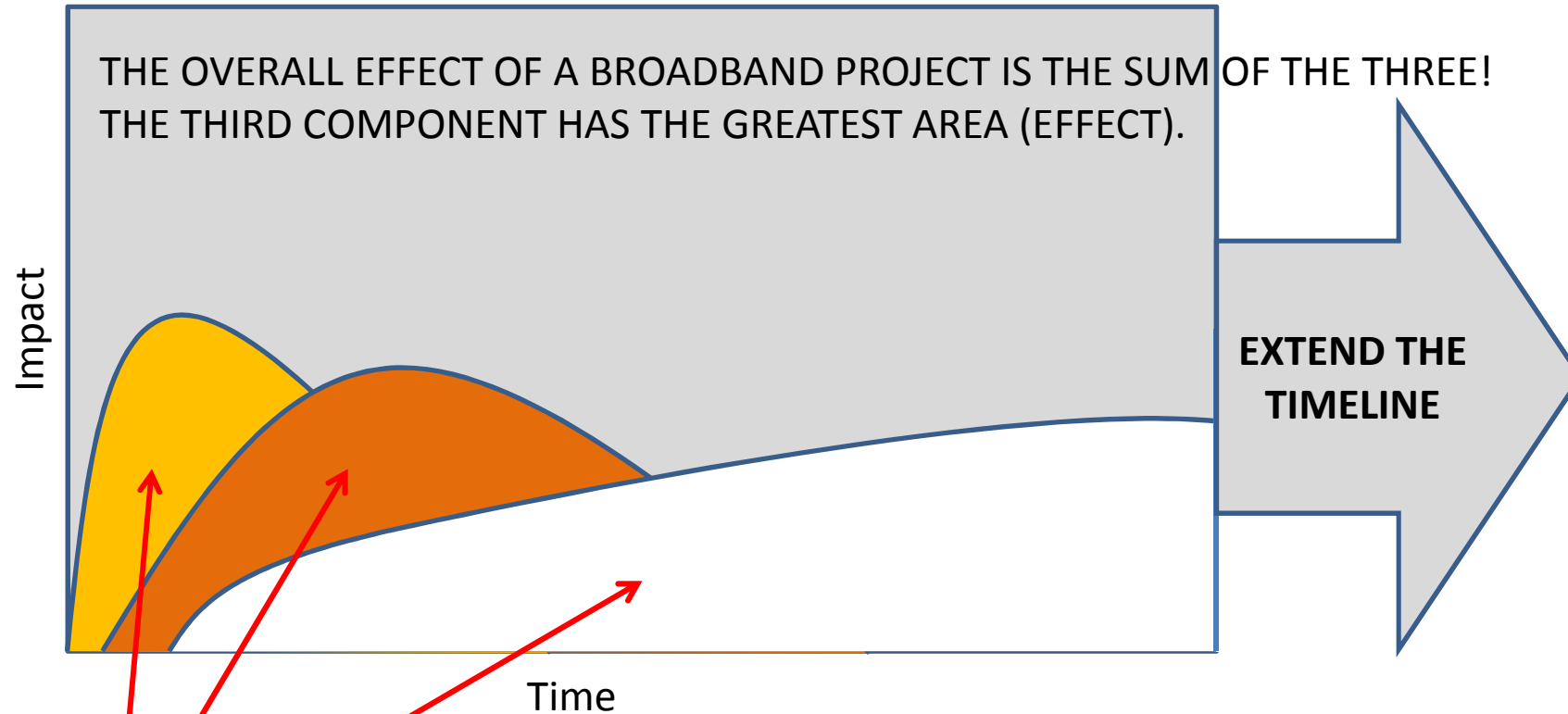
More efficient



almers, 2013

Source: Arthur D. Little research (covering more than 120 reports from leading research institutes)

...not necessarily!



1. Short term, initial investment stimulated increase,
2. Mid term, productivity increase,
3. Long term, structural change induced increase.

Broadband is good if:

- If and only if the most durable technological solution is chosen!

As long term perspective is crucial, in rural deployments this is even more important!

- If and only if the solution with the lowest total cost is chosen!

As low operational costs are crucial, in rural deployments this even more important!

Final thoughts I

- Because of the (extremely) low population density, generalisation from projects in urban areas cannot be done!
- For the sustainability of the rural broadband projects, operational costs are very important (including the cost for mandatory equipment substitution). A long term planning is therefore required.

Final thoughts II

- If the total cost (investment plus operational) is calculated, in deep rural areas FTTH is the most economic solution.
- For the initial investment, it's not a problem of cost, but of the financing source.

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