

The attractiveness of trans-sectoral broadband services for residential users: The case of Netherlands

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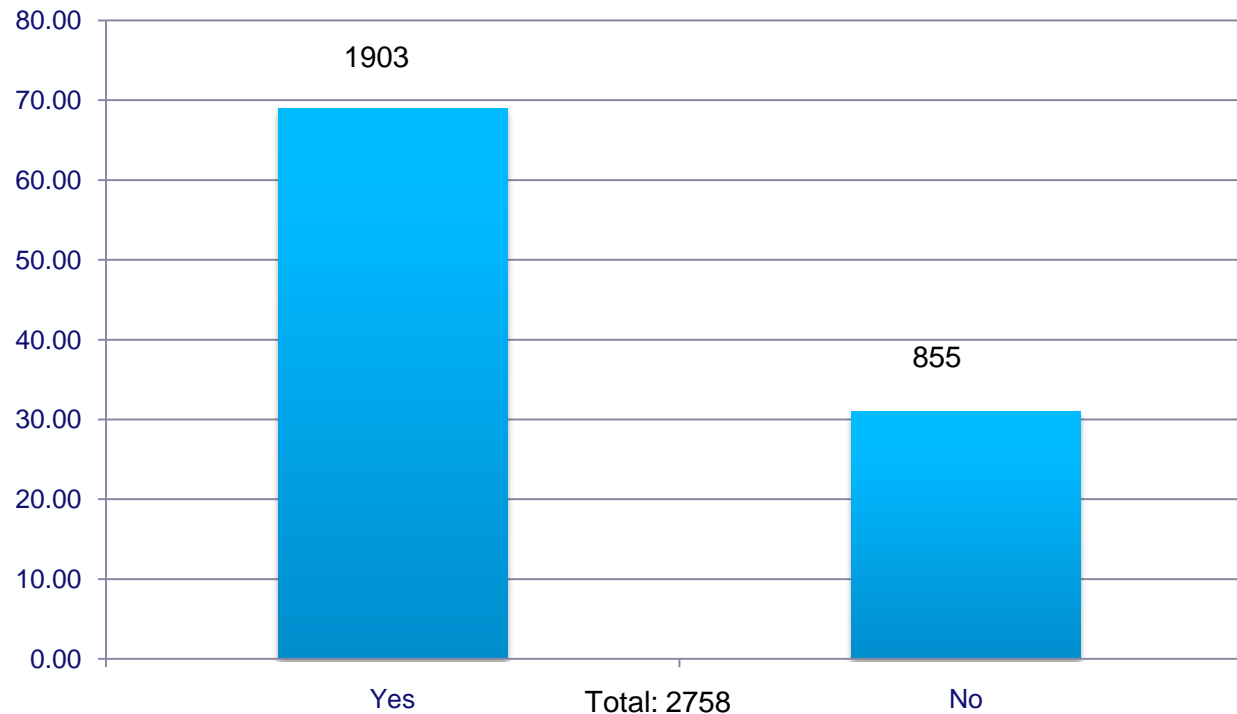
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Where innovation starts

Interest in experimenting with new trans-sectoral BB services

Question: Would you be interested in helping Ons Net Eindhoven by experimenting and testing of new broadband services?



Research question

- **Objective: To make optimal use of the potential embedded in the Fiber-to-the-Home (FttH) networks, trans-sectoral broadband services have to be developed**
- **Research question: What kind of features of trans-sectoral broadband services are important for residential users?**
- **Trans-sectoral Broadband Services: Convergence with other Sector (e.g. Health, Entertainment)**

Barriers to adoption

- **Supply-side explanations:**
 - Incumbents > new services not “enough” developed;
 - Little experience with marketing of these services;
 - Insufficient new specialized firms able to supply these new services;
 - Difficulty in coordinating new “platforms” of cooperating firms (trust between parties).
- **Demand-side explanations:**
 - Slow adoption by consumers > lack of knowledge about new services & not interested in paying for services;
 - Difficulty of using & maintaining these new services.

Previous research

Studies on trans-sectoral broadband services

- **Ida & Horiguchi (2006):** potential demand for terrestrial digital broadcasting, tele-working and tele-education in urban areas
- **Ida & Skahira (2008):** individual characteristics including income, service usage including motion-picture viewing, and type of residence impact on migration to FTTH, but "information poor" fail to migrate
- **Sadowski, et. al (2008):** FttH networks can have positive effect on social capital if related to social objectives; Users with lower income & lower education benefit over-proportional from new interactive social media

Categories of trans-sectoral BB services

Telecommunication and broadcasting services	Security services	Health and eldercare services	Society and life services
Cloud computing	Home security	Automatic lights	E-government
Local TV	Smart Street surveillance	Emergency buttons	Emergency and disaster warning systems
Foreign TV-stations using IPTV	Video monitoring	Entry control	Neighborhoods websites
Free Video-on-demand	Video surveillance	Inactivity sensors	Online/offline courses
Network digital video recorder		In-home security	Policeman-online
Online back-up		Remote monitoring	Website building toolkit
Pay Video-on-demand		Remote monitoring of health functions	e-commuting
Steaming music		Video communication	
VOIP			
HDTV			
Internet on TV			

Criteria: Technical feasibility, easy to be explained, include at least one service from the four categories described above

Methodology

- **Conjoint Analysis: Respondents evaluate several product concepts with a number of conjoined attributes (or product features);**
- **New fibre based services are defined as:**
 1. Network VCR
 2. Video calling
 3. Inactivity sensors,
 4. Medical video calling,
 5. Local TV,
 6. Home security cams,
 7. Access control
- **Choice > not to choose any of these services**

Methodology

- **After general part of survey (8,606 people approached via email, 2,682 responded (response rate of 31.2 %):**
 - **People asked to consider one of the seven services;**
 - **Which service depended on answers provided in general part of the survey (pre-sorting respondents to prevent them from having to evaluate a service they would be very unlikely to find attractive at all)**
 - **Adding randomly selected respondents to each conjoint analysis to provide a control groups;**
 - **Respondents have been segmented in 7 groups in order to divide the sample group into a more heterogeneous subsets (better segmentation)**

The choices for residential users

€ 10 per maand

Bediening via TV

Installatie kosten € 50

Helpdesk via telefoon,
e-mail en lokale winkel



€ 5 per maand

Bediening via de
computer

Installatie kosten €
100

Helpdesk via telefoon
en e-mail



€ 20 per maand

Bediening via TV

Geen installatie kosten

Helpdesk via telefoon,
e-mail en lokale winkel



Geen: Ik zou geen van
deze opties kiezen



Segmentation of residential user groups

Group	Description
Active individualists	<ul style="list-style-type: none"> • Youngest group; students; Starters • Now: Fashionable; little interest in environment; renting • Future: No standard housing; gadgets
Domestically oriented	<ul style="list-style-type: none"> • Elderly, low education • Rental apartment; practical • Future: Conservative; service package
Settled Idealist	<ul style="list-style-type: none"> • All ages • Now: Own large houses; environmentalist; active and involved; home improvement & gardening • Future: Expensive & luxurious houses; change oriented
Tolerant socializers	<ul style="list-style-type: none"> • Age 24 – 45 • Now: environmentalist, tolerant; big living-room; relatively wealthy; • Future: Owns house with historic value
Neighborhood oriented	<ul style="list-style-type: none"> • Age 25 – 45 • Now: no interest in environment; passive; rents or owns row-house, traditional, self-employed; • Future: conservative; rents or owns row-house
Hurried middleclass	<ul style="list-style-type: none"> • Often young families < age 35; relatively well educated; • Now: Status important; New houses; new gadgets • Future: Owns a house bigger and more luxurious
Community minded	<ul style="list-style-type: none"> • Often > age 45, low education, often retired; • Now: traditional, well-balanced, health and family important • Future: No change

Data and Descriptives

	Respondents	Non Option
Network VCR	568	24.6%
Video Calling	272	- -
Inactivity Sensors	288	55.5%
Medical Video Calling	86	- -
Local TV	347	39.0%
Home Security Camera	408	30.0%
Access Control	133	- -

Results of the analysis

	Network VCR	Inactivity Sensors	Local TV	Home Security Cameras
Resp. No.	568	282	347	408
LL(0)	-1850.3	-694.1	-663.9	-1205.5
LL(Max)	-2043.2	-576.4	-380.7	-718.1
Pseudo (R²)	0.12***	0.20***	0.46***	0.45***
Monthly Charge (Est./S.E.)	-0.008 (0.001)***	-0.052 (0.006)***	-0.140 (0.016)***	-0.112 (0.010)***
Remote (Est./S.E./A.P.E.)		-0.074 (0.180) 1.43		
Comp (Est./S.E./A.P.E.)	-0.115 (0.060)* 15.28	-0.046 (0.176) 0.89	-0.115 (0.060)* 0.82	-0.740 (0.127)*** 6.64
Mobile (Est./S.E./A.P.E.)	-0.153 (0.060)* 20.29			-0.877 (0.137)*** 7.86
Install. Charge (Est./S.E./A.P.E.)	-0.005 (0.001)*** 0.64	-0.004 (0.001)*** 0.07	-0.011 (0.001)*** 0.08	-0.004(0.001)*** 0.03
Local shop (Est./S.E./A.P.E.)	0.038 (0.048) 5.02	0.066 (0.082) 1.28	0.072 (0.111) 0.52	-0.098 (0.068) 0.88
WTP per month	8 Euro	3 Euro	2 Euro	7 Euro

(Explanations: A.P.E. average price elasticity with respect to monthly charges, WTP willingness to pay)

Results according to User Segments

Segment	Network VCR	Inactivity Sensors	Local TV	Home Security Cameras
Domestically oriented	38.4	52.6	63	50.0
Settled Idealist	25.5	51.7	38.2	41.1
Tolerant socializers	15.5	-	39.5	23.7
Neighborhood oriented	16.3	-	47.0	24.7
Hurried middleclass	33.7	40.2	36	27.5
Community minded	42.8	35.1	50	37.1
Average	24.6	44.9	39.1	29.2

(Explanation: Percentage of Users opting for the Non-option)

Results

- **There is willingness to pay for trans-sectoral broadband services**
 - **Only 30% of people chose the non-option all 7 times they were asked to evaluate product concepts.**
- **Apart from price, different product characteristics have an impact on their adoption**
 - **Computer and cell phone options significantly increase the attractiveness of home security system and network video recording.**
- **Surprises:**
 - **Local shop did not have any effect**
 - **Inactivity sensor not related to age**

Conclusions

- **User Innovations: Interaction between residential users and service providers important**
- **Open access increasingly important**
- **Coordination between different market and non-market parties**

**>> Follow-up: Living Lab Community Project called
“WoonService” (Home Service)**

**Involved: City, Cooperative ISP, Health Service Providers,
TUE**