



S3C
SMART **CONSUMER**
SMART **CUSTOMER**
SMART **CITIZEN**



B.A.U.M.
Ludwig Karg
B.A.U.M. Consult
München / Berlin



Oslo, June 3, 2015

Topics



- Smart Consumer, Smart Customer, Smart Citizen – the Project
- My Family, my car, my energy system
- Storage is key
- Sharing is a trend
- Utilities are developing new services
- The contribution of S3C

Oslo, 3.6.2015

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2 | Internal energy market

5
GUIDING
DIMENSIONS

Energy should flow freely across the EU – without any technical or regulatory barriers

This means connecting markets through interconnections and implementing and upgrading the internal market's software while enhancing regional cooperation and empowering consumers.

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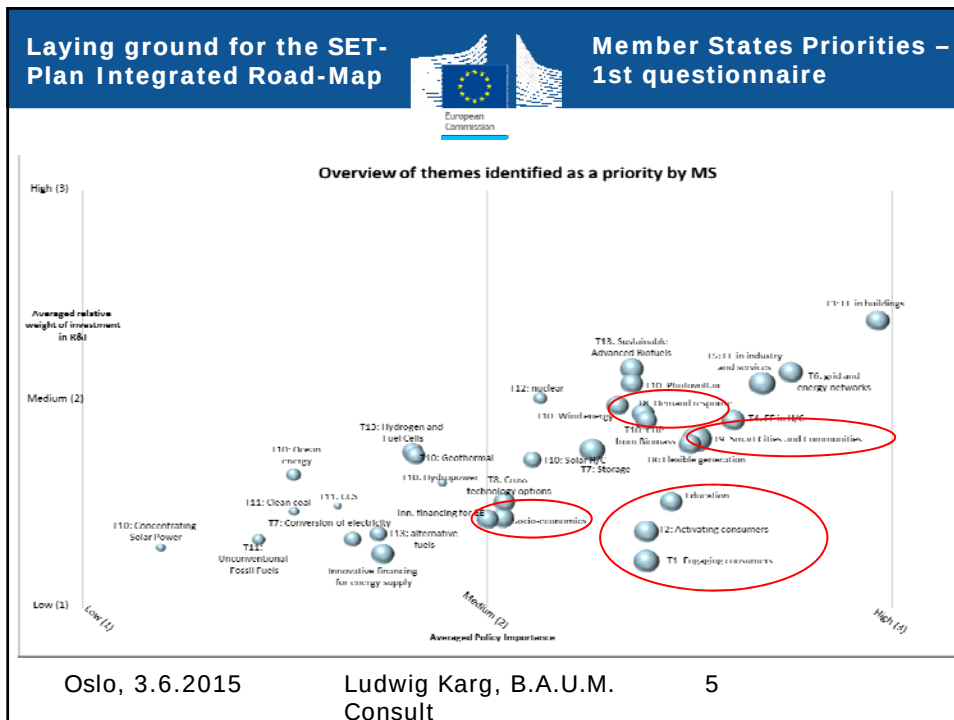
Source: DG Energy, Janis Folkmanis

SET-Plan Integrated Road-Map: Organised around 5 'Integrated Challenges' and themes

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Source: DG Energy, Janis Folkmanis




S3C

www.s3c-project.eu/ **It's about people ...**

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Core Idea



Support energy utilities of the future to effectively cooperate with ...

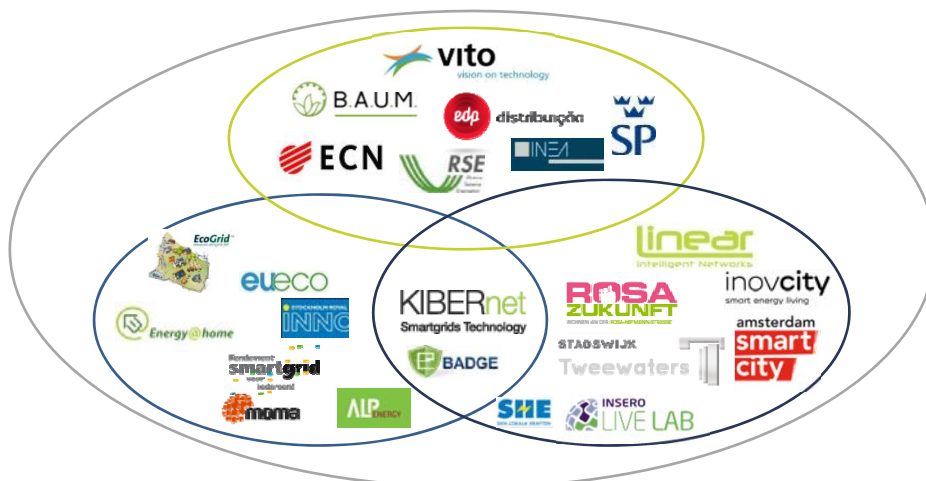


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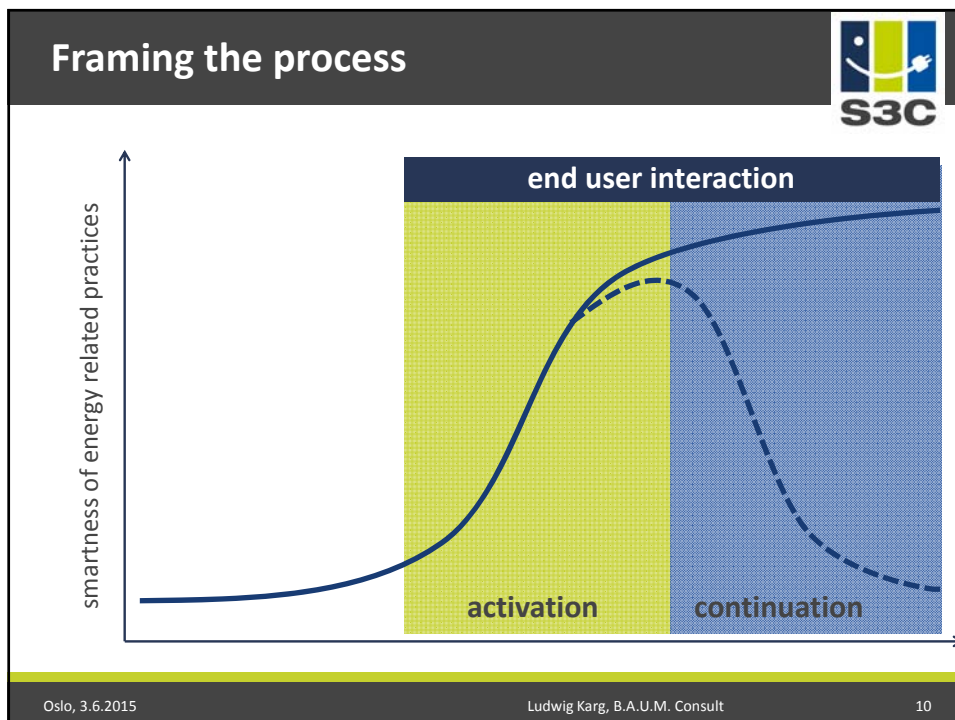
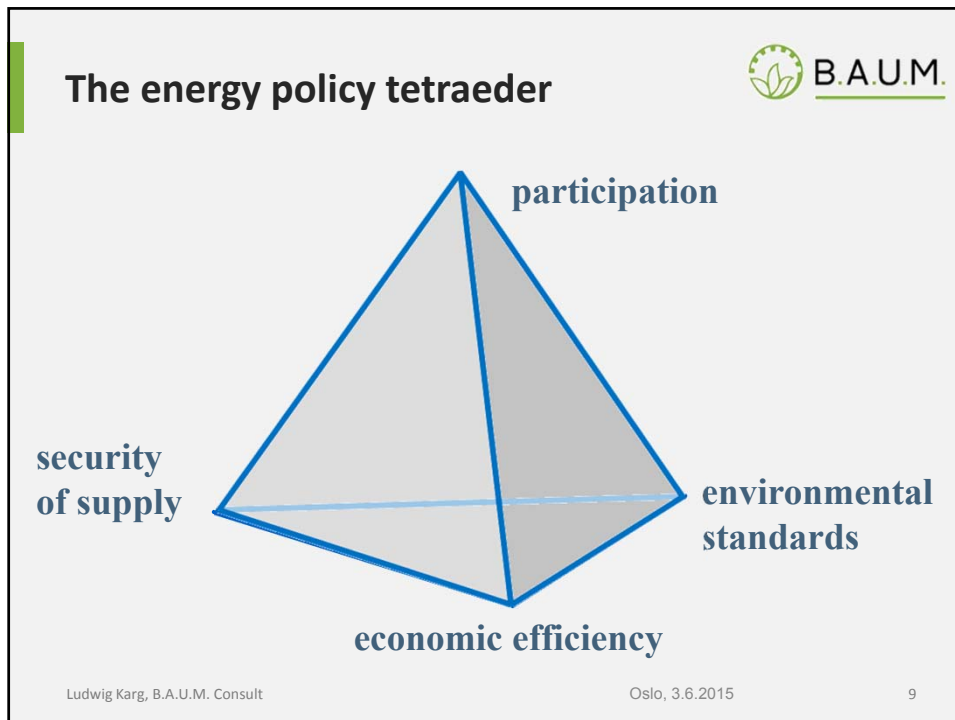
The S3C Family of Projects



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The Smart End User




Using renewable energies...

Switching retailer on the internet ...

Being rewarded for my flexibility ...

Generating energy at home ...

Saving energy ...

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What people actively do ...




I am tired. I sit down on this chair.

I need some good talks. I'll go visit my freind.

I'm hungry. I will prepare a meal.

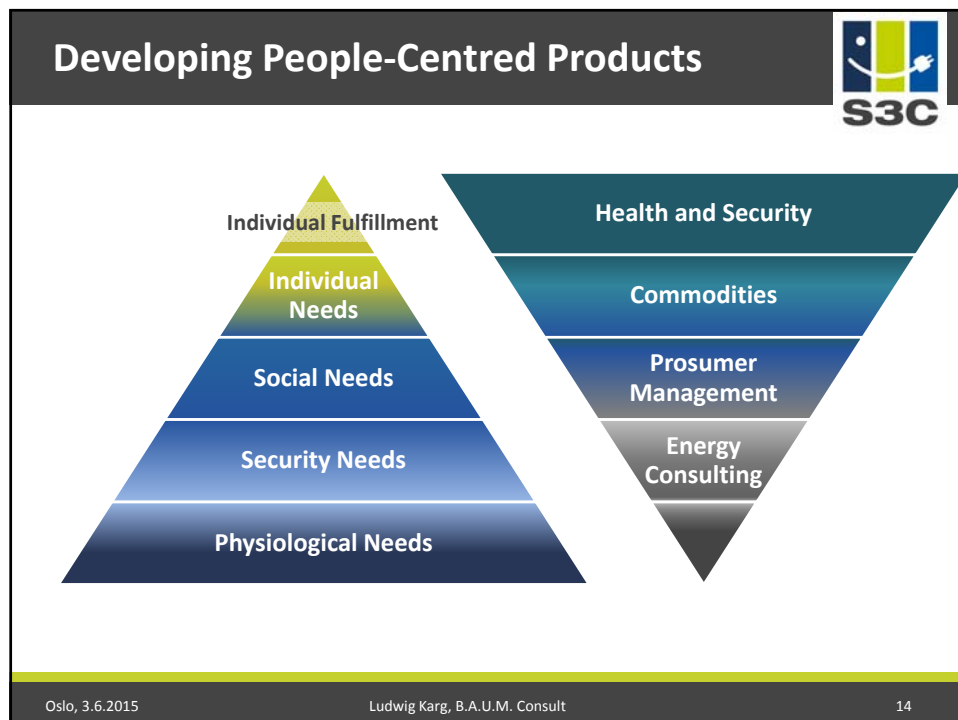
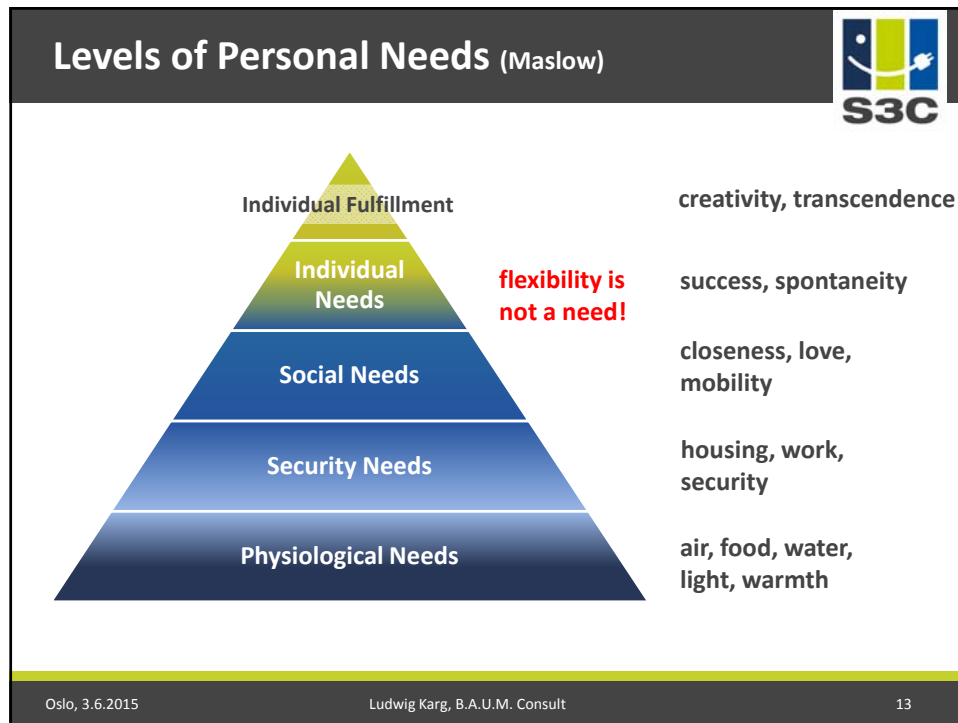
I am
I will use some energy!

?

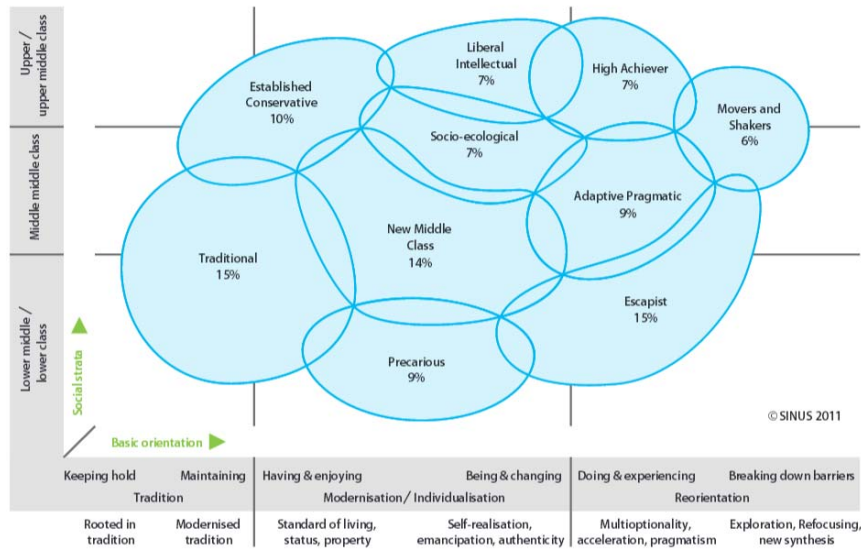
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People are different



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Expectations of our „customer“



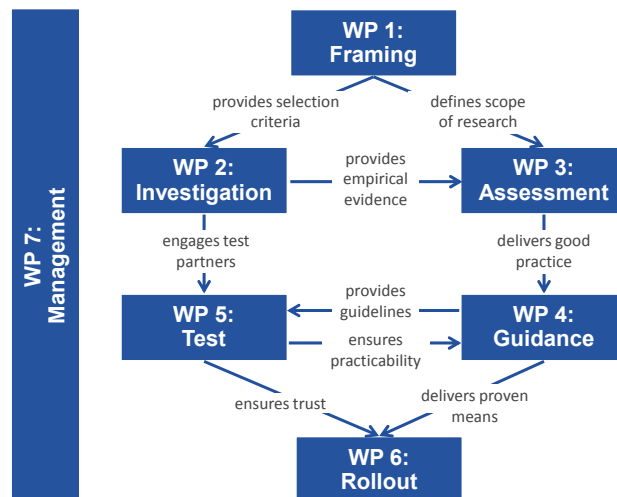
- contribution to European Smart Grid discussion > consumer involvement (DOW)
- practical guidance that translates common knowledge and new findings to action in utilities (de Nigris, Sanchez, Krause)
- target group specific presentation, e. g. training seminars (ADB)

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Work Packages and their interlinkage



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~~My Home is my Castle~~
My Home is my Energy System



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Autarky
Autonomy

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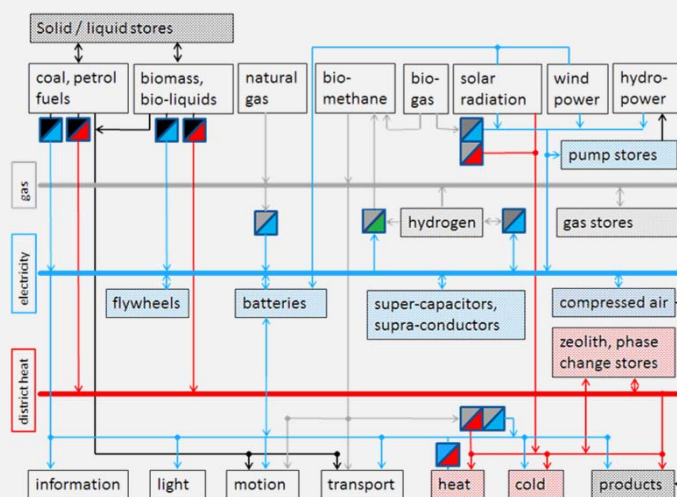
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Energy Pathways and Storage



<http://www.alpstore.info/>

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The Power-Wall: a powerful start into the markets



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Making Business with Sharing



facebook

Facebook ermöglicht es dir, mit den Menschen in deinem Leben in Verbindung zu treten und Inhalte mit diesen zu teilen.



Startseite | Der Verein | Feedbacks

WAS KANNST DU VERLEIHEN?



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A Trend towards Sharing Economy



What we share ...



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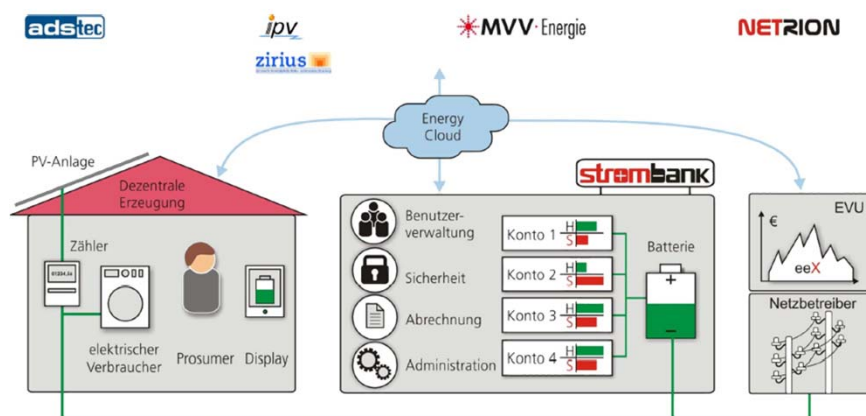
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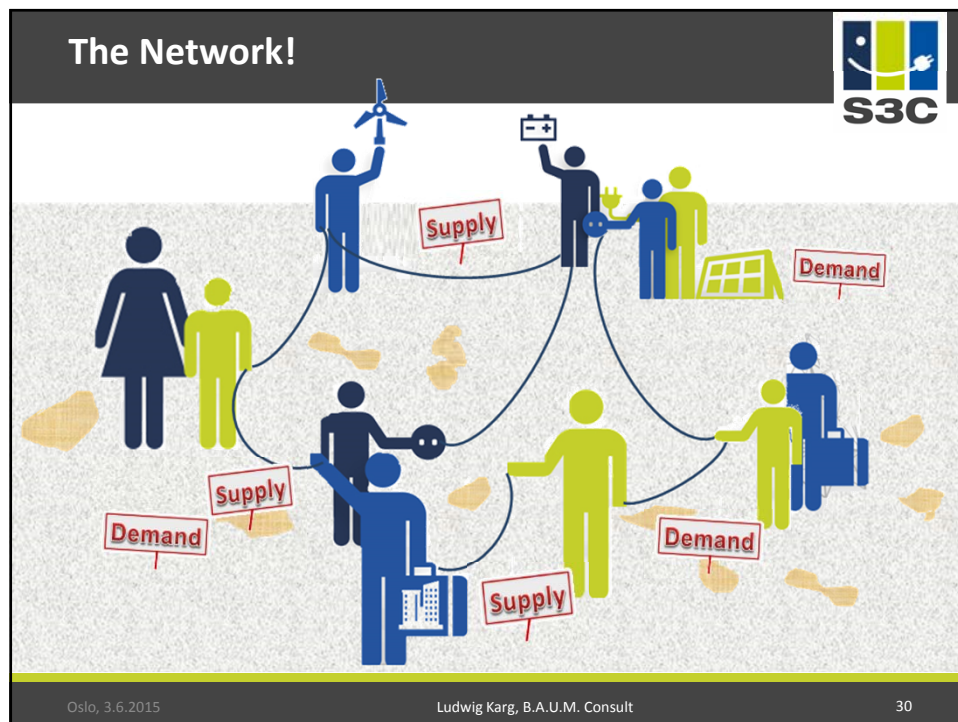
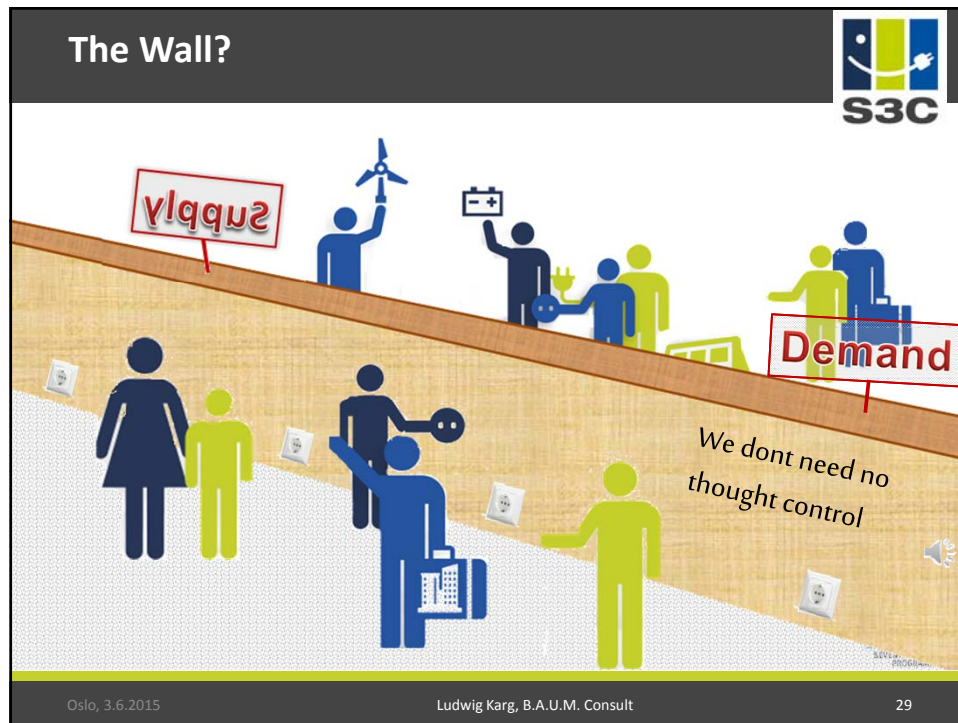


Quelle: Vortrag von Dr. Robert Thomann, MVV Energie AG

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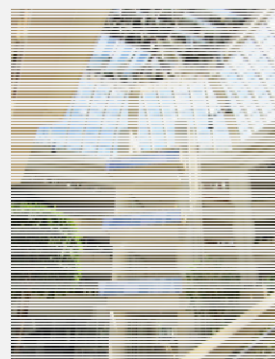
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2nd Life Batteries for Intelligent Solutions



image: Renault



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Crowd Funding: Sharing the financial burden



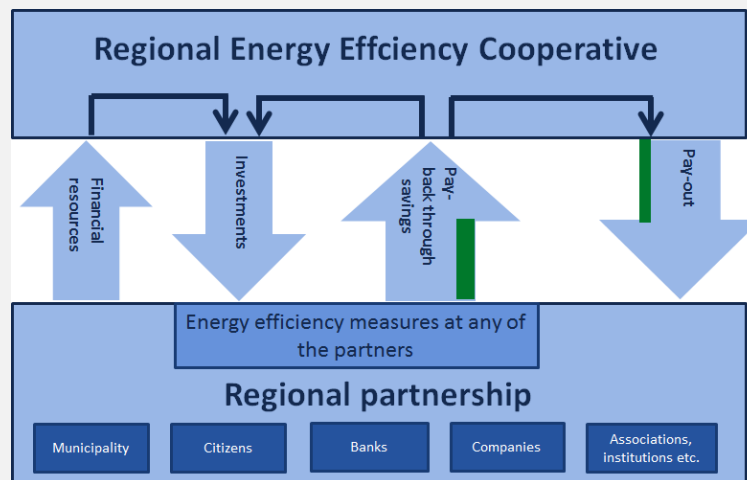
source: Crowdfunding for IndieWatt, the transportable battery for the Swiss Alps
(www.indiewatt.ch)

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Cooperatives for energy transition



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The Utility of the Future!?



•polarstern Ökostrom & Ökogas Die Idee Über uns **Botschafter & Community** Blog Service Kontakt Kundenbereich

Wir glauben, jede gute Idee ist eine Bewegung...

...kein Zustand. Erst durch unsere Freunde, Unterstützer, Fans und Botschafter wird Polarstern lebendig. Wir werden nur gemeinsam etwas verändern, nur gemeinsam die Zukunft gestalten. Hinter Polarstern steckt keine schlaue Formel oder große Theorie, sondern viele einzelne Menschen, die zusammen etwas bewegen wollen. Durch unsere Botschafter zieht die Idee von Polarstern immer weitere Kreise. Als Unterstützer sehen wir jeden, der über uns spricht, schreibt, singt, blogt oder diskutiert. Wir glauben an die Kraft der Polarstern-Community. Du auch?








Polarstern Energie

Freitag gibt's Zeugnisse. Polarstern Ökostrom zählt laut ÖKO-TEST zu den allerbesten Ökostromtarifen in Deutschland: Wirklich nachhaltig erzeugt, wirklich

Polarstern Energie

 3.724 Personen gefällt Polarstern Energie.

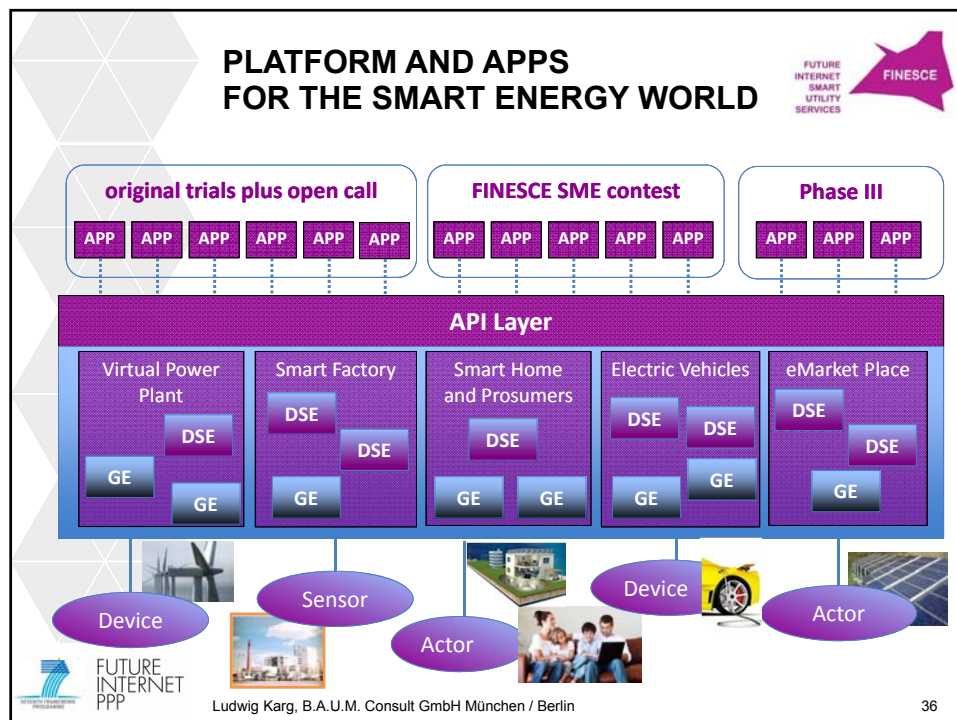
Polarstern-Botschafter

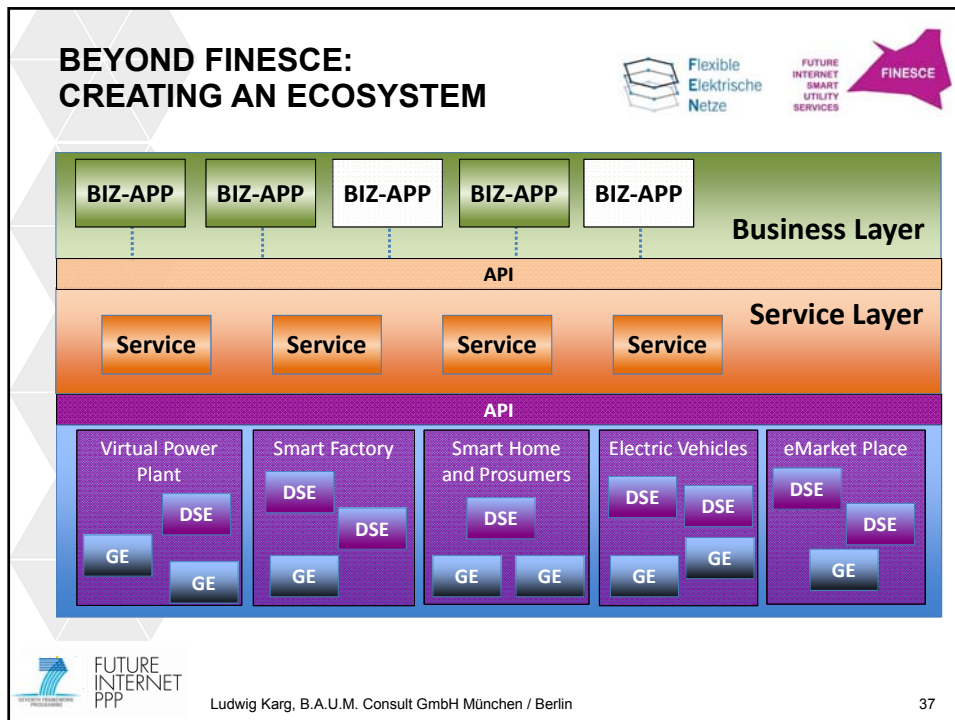
Wir werden von herausragenden Persönlichkeiten unterstützt, die uns und viele andere inspiriert haben. Jeder von ihnen hat seinen ganz eigenen Grund sich bei Polarstern zu engagieren.

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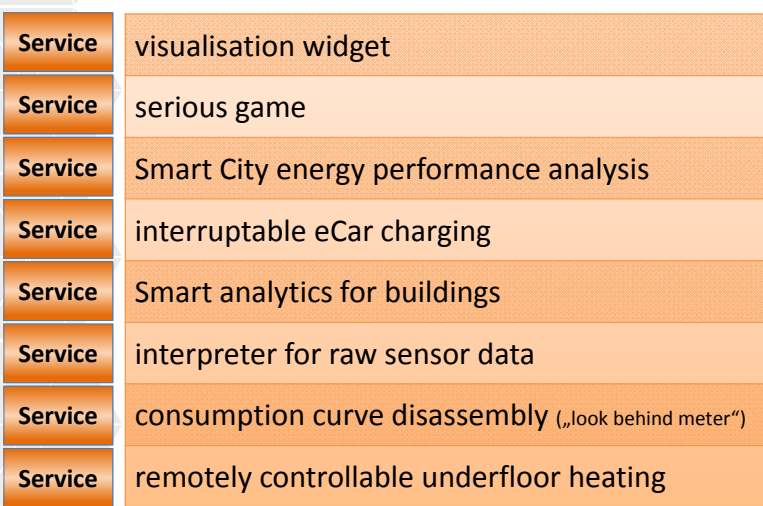
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SERVICES

(examples from FI PPP Phase 3)



Service	visualisation widget
Service	serious game
Service	Smart City energy performance analysis
Service	interruptable eCar charging
Service	Smart analytics for buildings
Service	interpreter for raw sensor data
Service	consumption curve disassembly („look behind meter“)
Service	remotely controllable underfloor heating

Logos: Flexible Elektrische Netze, FUTURE INTERNET SMART UTILITY SERVICES, FINESCE.

FUTURE INTERNET PPP

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BIZ APPLICATIONS

(examples from FI PPP Phase 3)





Biz App	least cost supply	
Biz App	live at home for longer	
Biz App	energy shopping anywhere	
Biz App	direct energy marketing	
Biz App	community storage	
Biz App	regional payback	
Biz App	power flat rate	
Biz App	targeted product marketing	



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New business models: a long way to go?



B.A.U.M.



by CDTM



energy on the go

- living at many places
- charging notebooks and mobiles anywhere
- charging electric vehicles anywhere?

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Extreme direct marketing



Strom geben

Du betreibst im Keller, Garten oder auf dem Dach eines Hauses eine kleine Erzeugungsanlage und speist überschüssigen Strom ins Netz ein? Nutze buzzn und teile ihn mit Menschen in Deiner Nähe!

Mehr erfahren

Jetzt anmelden

Strom nehmen

Dir ist es wichtig, wen Du mit dem Strombezug für Dein Haus, Dein Büro oder Deinen Betrieb unterstützt? Wechsle zu buzzn und teile Deine Kaufkraft mit Stromgebern in Deiner Nähe!

Mehr erfahren

Jetzt anmelden



Die Dezentralität hat mich überzeugt.



Vielen Dank für Euren Einsatz!



Hervorragender Service!



Unser Strom jetzt bei mir zuhause!

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Regional Payback System



- no discounts!
- cross-selling with other regional suppliers



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Chalk board community business



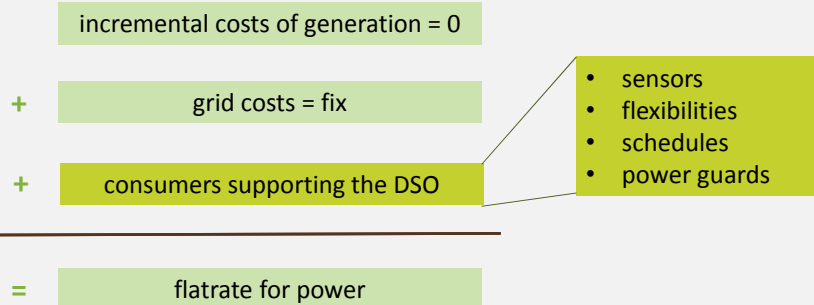
Corto Café in Rio de Janeiro

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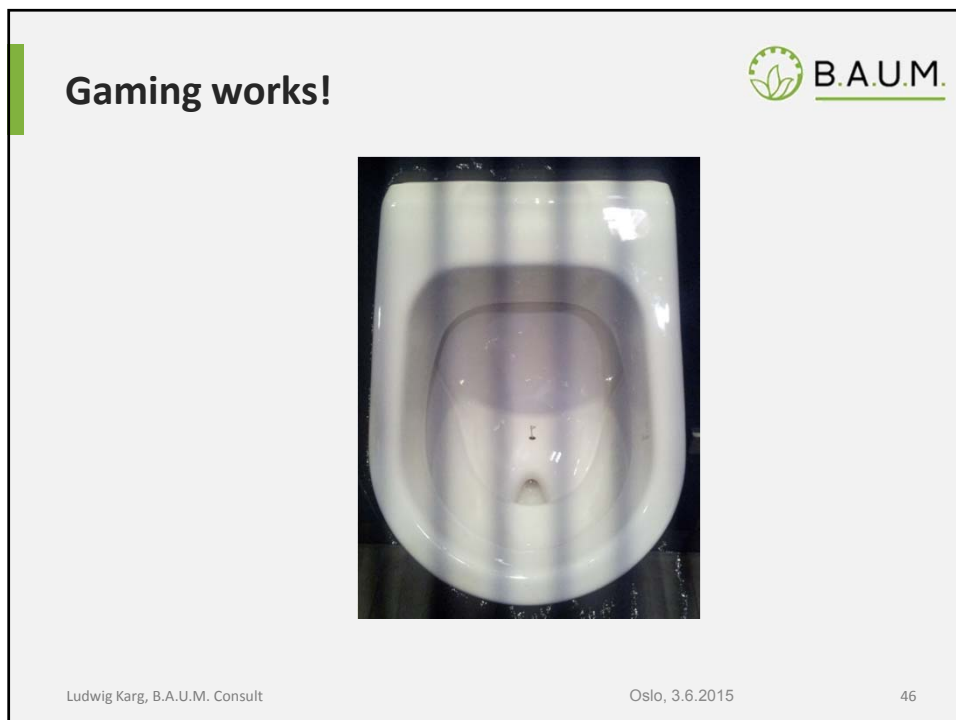
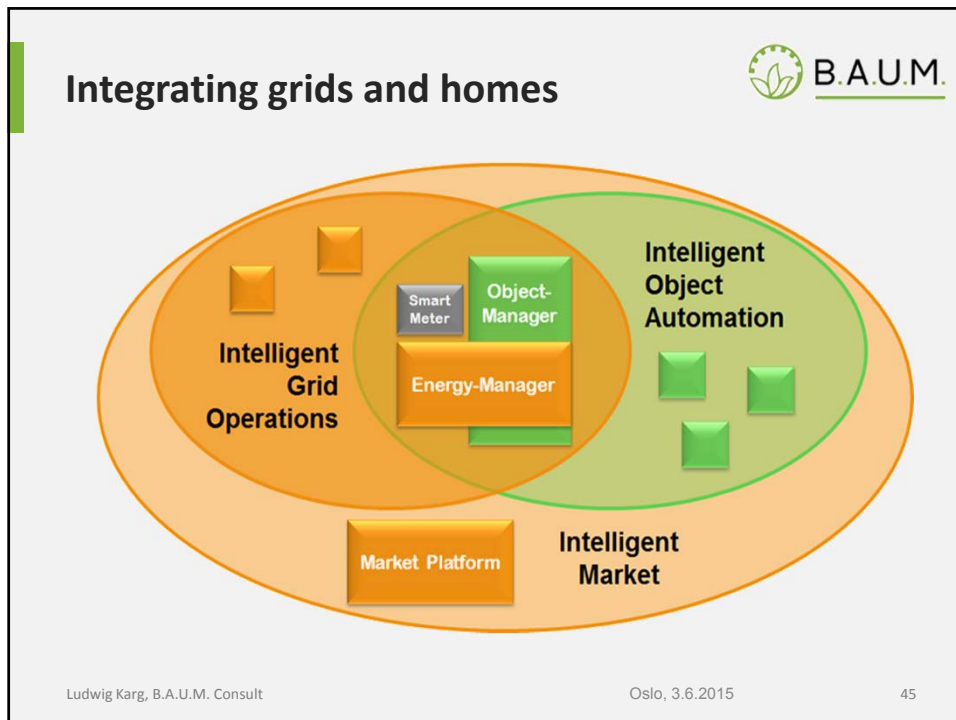
The Flatrate



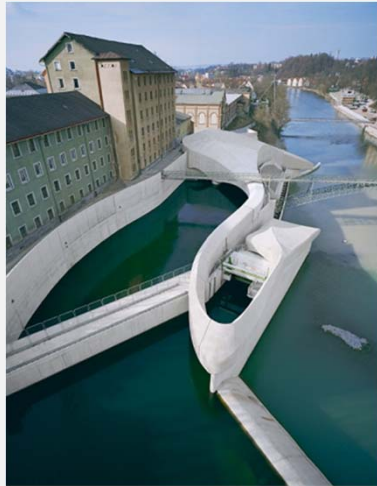
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Power Station? Art?



AÜW, Kempten

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Cross-cutting Success Factors



1. Address end users as human beings instead of as points of electricity demand
2. Obtain a thorough understanding of target groups
3. Give personal attention and build trust over time
4. Emphasize sense of place: underscoring the local character of a smart energy project
5. Draw upon community dynamics
6. Motivate end users with fun and good news
7. Test before the roll-out

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Cross-cutting Success Factor 1



- Address End Users as Human Beings Instead of As Points of Electricity Demands!



*Model region Salzburg – PEEM (AT)
FORE-watch in-house display designed as a
kitchen clock to suit everyday social
practices.*

27.05.2014

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Cross-cutting Success Factor 1



- Address End Users as Human Beings Instead of As Points of Electricity Demands!

Sala-Heby Energi (SE)

Stepwise implementation of ToU-tariff: consulting local end users to tailor the tariff structure to their needs and adjusting terms and conditions along the way.



27.05.2014

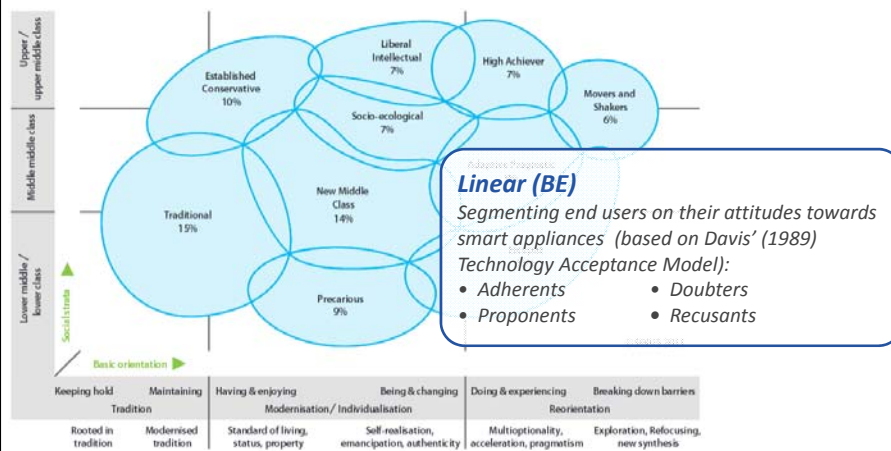
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Cross-cutting Success Factor 2



Obtain a Thorough Understanding of Your Target Group!



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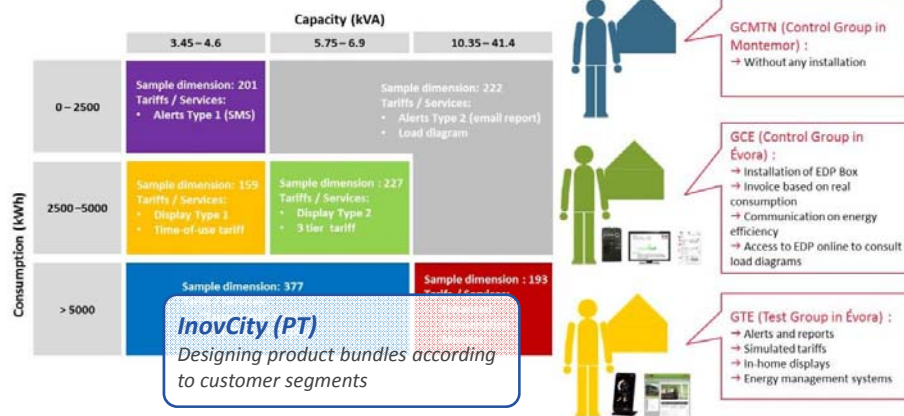
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Cross-cutting Success Factor 2



Obtain a Thorough Understanding of Your Target Group!



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Cross-cutting Success Factor 2



Obtain a Thorough Understanding of Your Target Group!



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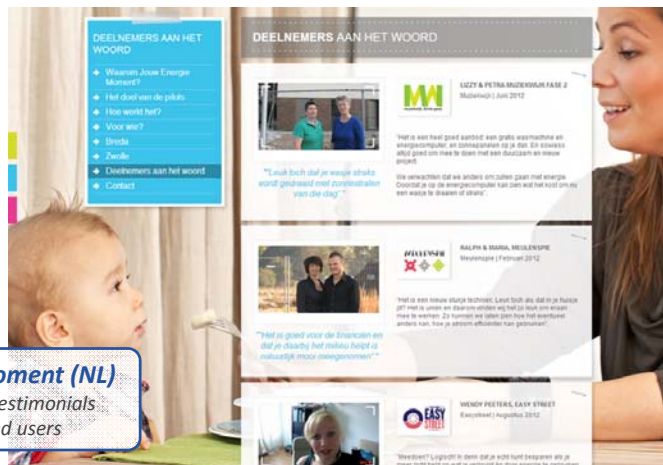
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Cross-cutting Success Factor 3



Give personal attention and build trust over time!



Jouw Energie Moment (NL)
Publishing personal testimonials
from participating end users

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Cross-cutting Success Factor 3



Give personal attention and build trust over time!



3e-Houses (DE/ES/UK)
Home visits to create interactions with
vulnerable target groups (e.g. elderly,
social housing residents)



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Cross-cutting Success Factor 4



Emphasize a 'sense of place' by underscoring the local character of a smart energy project

EcoGrid (DK)

community event with a locally well known comedian and a band to inform participants and recruiting community members .



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Cross-cutting Success Factor 4



Emphasize a 'sense of place' by underscoring the local character of a smart energy project

Texel, slim zelfvoorzienend
is slim samenwerken
op energiegebied



Texel Cloud Power (NL)

Regionalised the project's name to frame it into the local habitus, taking into account regional attitudes and identities: 'Texel smart self-sufficient'



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Cross-cutting Success Factor 5



Draw Upon Community Dynamics!



Rendement voor iedereen (NL)

Community coach to shape and support the community of end users and organize a board of 'project ambassadors'.



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Cross-cutting Success Factor 5



Draw Upon Community Dynamics!



Eueco (DE)

Standardizing community processes for local energy cooperations with a reliable IT support system.



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Crosscutting Success Factor 6



Motivate End Users with Fun and Good News!

OSCAR (CH)
Gamification approach to foster energy awareness, provide hints and tips and to collect end user data.

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Crosscutting Success Factor 6



Motivate End Users with Fun and Good News!

BeAware (FI/IT/SE)
EnergyLife game (smart phone app) provides playful social comparison feedback based on consumption data and hints and tips to increase energy awareness.

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Crosscutting Success Factor 7



Test Before Roll-out: Ensure Functioning!

Technological Development

Design Phase

Adjustment phase

Implementation Phase

Include 'consumer'-
experts such as **social
scientists**, but also trained
**installers or customer
service**

Plan a **friendly user
trial** and qualitative
interactions to detect
malfunctions or flaws
in the overall design.

**Rollout functioning
equipment and be prepared
for questions and concerns** of
field test customers: Smooth
processes are a prerequisite to
acceptance

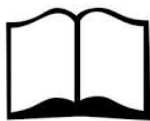
MOMA (DE) - Energy@home (IT) - Smart Metering Projekt (DE) – Linear (BE)

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S3C toolkit terminology



- **Guidelines** are presented on two levels in the toolkit:

1. Descriptive *information to explain* a topic, to address issues or questions that should be taken into account and how it relates to other topics in the toolkit.
2. Step-by-step *descriptions to implement* a tool, including do's and don'ts and practical examples – see example on the next slide.



- **Tools:** Instruments or processes that aim to facilitate the interaction of end-users with the project partners, the electricity grid, and the energy market. Tools can be *technical, financial* and oriented towards *communication and engagement*.

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Guidelines and Tools



Guidelines

Automatic and manual flexibility operation

Baseline calculation

Bonus/malus

Co-creation (under construction)

Community support

Competition & social comparison

Consumption shifting and reduction (under construction)

End user feedback

End user segmentation

Energy consultants and face-to-face support

Evaluation through end user centred KPIs

Gamification

Getting to know your target group

Goal setting component as an incentive

Improving the method (under construction)

Introduction of peak levelling to the end user (under construction)

Meter installation

Monetary incentives

Monitoring demand response

Monitoring functionalities

Non-monetary incentives

Performance indicator data processing (under construction)

Potential allies on the regional level

Privacy & data security

Recruitment campaigns (under construction)

Self-evaluation (under construction)

Setting up a fake tariff

Setting up a price use mechanism

Smart appliances

Stakeholder coalitions

Storytelling

Tools

Co-creation workshops (under construction)

Detection of load shift capacity (under construction)

ENact 2020 Workshop

End user segmentation (tool description)

End user segmentation (excel template)

Hotline and customer support

Industrial partner engagement (under construction)

Most Significant Change (MSC)

Personalised mailing template

Postcard from the future (tool description)

Postcard from the future (word template)

Questions for the evaluation within smart grid projects

Strategy finder for tariffs and incentives (under construction)

Training installers

FAQ for Installers

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Co-creation of Products



Pictures from the documentation of the congress „Enact 2020 – Energie-Klima-Nachhaltigkeit“, 11th of November, Erfurt, Germany.



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The S3C Knowledge Platform



PRODUCTS & SERVICES

WHAT NEW SERVICES CAN I DEVELOP? >>

LEARNING

TRAIN ME HOW TO SUCCESSFULLY ENGAGE WITH MY CUSTOMERS >>

TOPICS

I'M LOOKING FOR MORE INFORMATION ON A SPECIFIC TOPIC. >>

This website is meant for anyone who is involved in, or intends to become involved in, the development of smart grid projects, products, or services in which engagement of end users plays an important role.

What you find here is a set of tools and guidelines with practical information and advice on the implementation of your project, based on in-depth investigation of a family of [partner projects](#). The [collection of tools and guidelines](#) provides answers to questions like:

- How can I use smart grids to help people save energy?
- What should I take into account in the planning phase of my project?
- Which types of incentives are there, and when to use which one?

READ MORE >>





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