Task 28 within IEA RD&D Wind

Social Acceptance of Wind Energy Projects

"Winning Hearts and Minds"

May 24th 2011
EXPERTS' GROUP ON R&D PRIORITY-SETTING AND EVALUATION
The transition to a low-carbon society –
Socio-economic considerations

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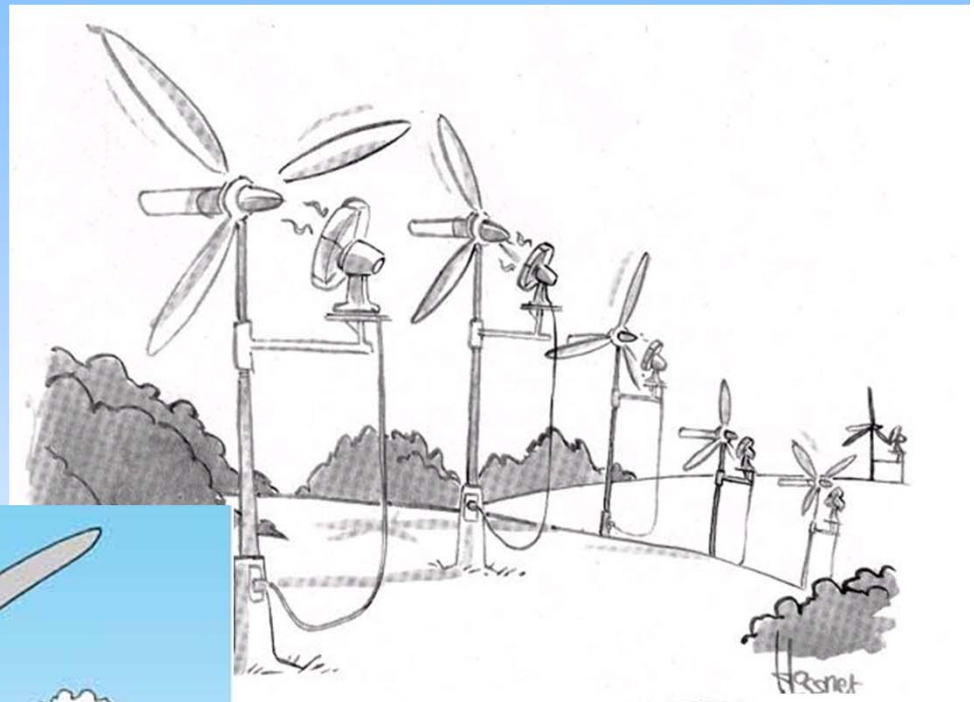
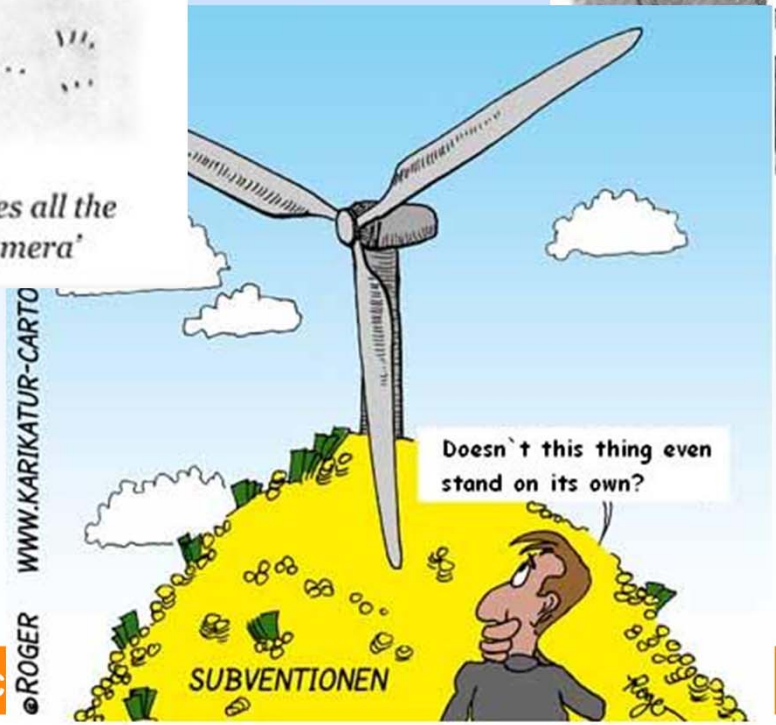
Efficacy and Economy





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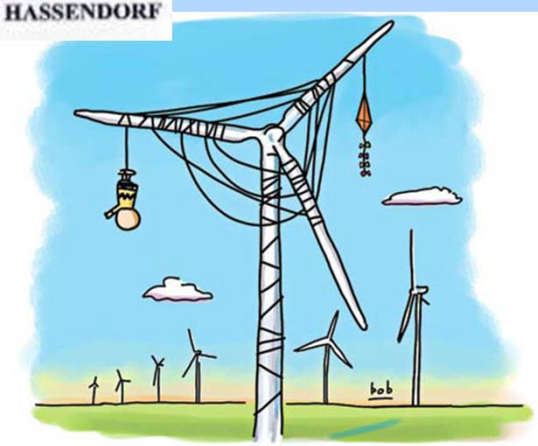
Crowded Landscapes, Bats & Bees

Opposition



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Social Acceptance: Issues

- **Ambitious targets in many states**
- **General support is high - but**
  - Strong local resistance can generate animated community debates
  - Opponents are often well organized and funded
  - Coordination among groups via the web and other social media
- **Social acceptance may be a significant barrier to renewable energy policy goals**
  - Wind energy has an impact on the landscape and people
  - There are more and more and always bigger turbines!
- **Good Practice – how to enhance social acceptance?**

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IEA Wind

- **International Energy Agency Wind** Implementing Agreement for Co-operation in the Research, Development, and Deployment of Wind Energy Systems
- **Mission: "…to stimulate co-operation on wind energy research and development and to provide** high quality information and analysis to member governments **and commercial** sector leaders **by addressing** technology development **and deployment and its** benefits, markets, and policy instruments**"**
- **Participating countries** from Europe, North America, Asia & Pacific, International Organizations

IEA Wind

- **Information exchange**
  - Country and Task reports at meetings of the IEA Wind Executive Committee twice per year
  - IEA Wind Annual Report
  - Public Web site: www.ieawind.org
  - Members-only Web pages
  - Research Task reports posted to Website
  - IEA Wind Day – side-event at the EWEA 2011

IEA Wind

- **Active Research Tasks**
  - WAKEBENCH: Benchmarking of wind farm flow models (Task 31)
  - Dynamic Codes and Models for Offshore Wind Energy (Task 30)
  - Aerodynamic Data Analysis of the EU MEXICO Project (Task 29)
  - **Social Acceptance of Wind Energy Projects (Task 28)**
  - Consumer Labeling of Small Wind Turbines (Task 27)
  - Cost of Wind Energy (Task 26)
  - Power Systems with Large Amounts of Wind Power (25)
  - Wind Energy in Cold Climates (Task 19)
  - Base Technology Information Exchange (Task 11)

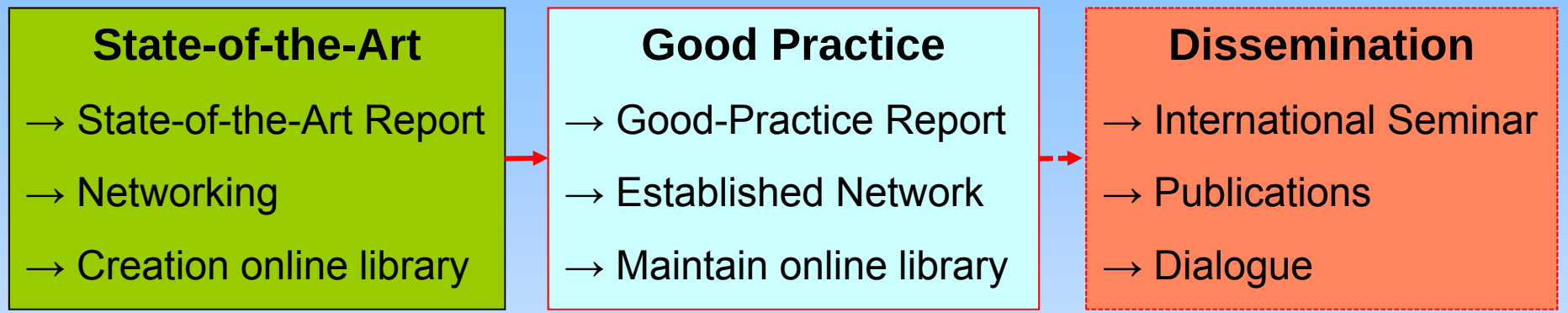
IEA Wind Task 28: Background

Task 28
Social Acceptance of Wind Energy Projects

- **International working group**
  - Embedded in IEA Wind
  - Participating countries from Europe, North America & Asia (Japan)
  - Experts from various disciplines (planners, engineers, sociologists, psychologists, environmental scientists)
  - Collect and exchange knowledge, disseminate good practices → accelerate realization of wind energy potential with a

cross-country & interdisciplinary Approach

Task 28: Work and Goals



- **Outcomes**
  - Establishment of international forum
  - Translate research results of social scientists into language of planners and engineers
  - Reports (State-of-the-Art, Good Practice)
  - Tools, Guidelines, Seminars, Publications…

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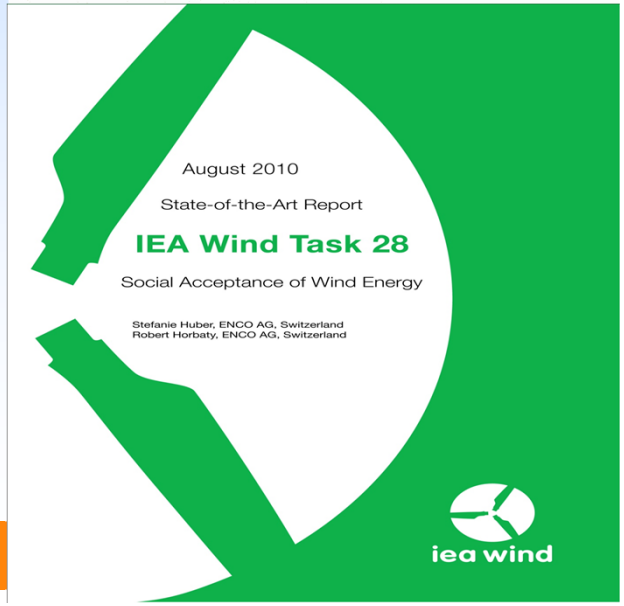
IEA Wind Task 28: Publications

- **www.socialacceptance.ch**
- **Webdatabase**
- **Presentations at EWEC 2010&11**
- **Presentations and lectures of working group members**
- **State-of-the-Art Report**
- **Article for WIREs Energy & Environment (forthcoming)**
- ***Work in progress: Good practice recommendations***



Elements of Social Acceptance

Well-being
- Standard of living
- Quality of life
- Health, lights, noise & shadow flicker
- Valuation of ecosystems

Policy & Strategies
- National framework
- Incentive programs
- Spatial planning
- Local implementation policy

Procedural design
- Regulatory requirements
- Fair and transparent processes
- The role of public engagement
- Provisions for cultural history / local context

Distributional justice
- Ownership models
- Regional welfare
- Creation of win-win-situations

Implementation strategies
- Visualization
- Social marketing / communication
- Checklists / guidelines
- Practical application of scientific results

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Policy & Implementation

An overarching framework with policies that facilitate local implementation can help to mitigate opposition

- **Good Practice Example: Danish Policy (2008)**
  - Introduced range of issues to help implementation of national targets
    - Local option for share purchase
    - Green scheme to enhance local scenic/recreational value
    - Fund to support early stage development
    - Wind Turbine Secretariat
    - Compensation for loss of property value

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Policy & Implementation

Local and regional authorities need knowledge on how to deal with wind energy and its impacts

- **Good Practice Wind Energy Planning Workshops**
  - Series of regional wind energy good practice workshops for local authority planners, officials and elected representatives by Sustainable Energy Authority Ireland
  - Information on frame conditions
  - Sharing of experiences

Planning

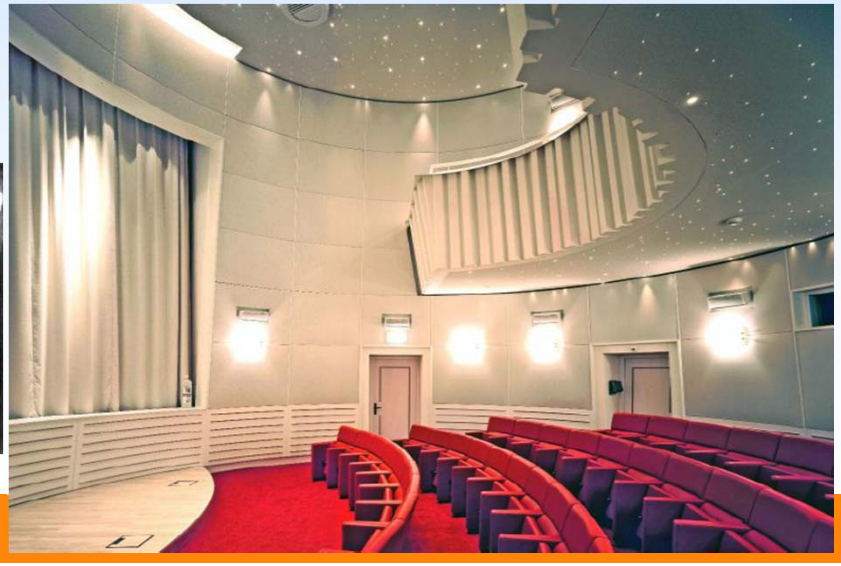
Wind energy projects require
new planning and decision making processes

- **Wind energy projects are part of complex decision making processes**
  - Process as a consequence of actions of mutually dependent parties
  - Realisation of wind parks hinges on the development capacity of a chain of parties and their ability to involve other actors in the network or area
  - Good experience has been made with independent process facilitators

Planning

Create “new landscapes”

- Wind energy as an opportunity



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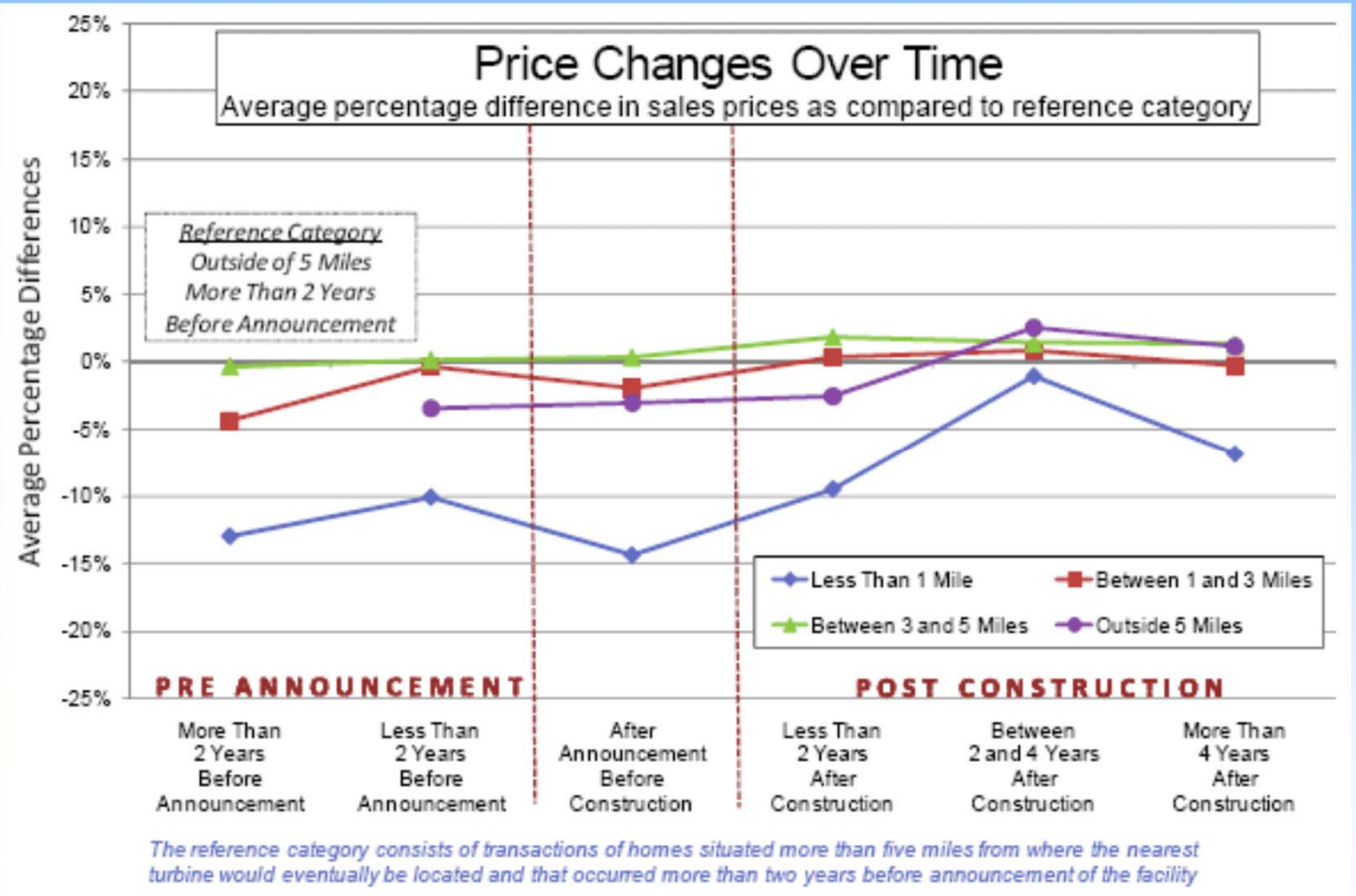
Well-being / Standard of Living



Temporal Aspects Model Result: Area and nuisance stigma

Source: Hoen et al. 2009; The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Site Hedonic Analysis

Distributional Justice

Local residents often bear a disproportionate share of wind energy's impacts

- **Broad-based sharing of benefits may alleviate some concerns of injustice**
  - Positive appreciation of costs and benefits
- **"Community wind" in Japan**
  - Mobilization of people & capital all over the country
  - Identification with projects (e.g. with names on turbine)
  - Results in greater economic and other benefits

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Distributional Justice

Good Practice Example “Social Innovation”

- **Offers investors opportunities for**
  - Socially responsible investment
  - Certification card
  - Name of investor on the tower
  - Direct participation in the project
- **Impacts local economics**
  - Direct and indirect economic returns
    - Project revenues
    - Jobs, general business activity
  - Visitors/tourism
    - 300-750 investors for each project; 90% of them have visited or intend to visit the sight.
- **Creates new social networks**

Distributional Justice

Benefits for the host communities can have varying characteristics

- **70% of the business tax**
  - To remain in the host communities of the wind farms
- **Community funds**
  - Paid out to local residence
  - Environmental, educational, arts and sporting projects
  - Sustainable criteria & energy efficiency

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Procedural design

Stakeholder networks are important means to enhance social acceptance and understanding

- **Educating influential citizens and giving them the spotlight to teach themselves**
  - Public formus inform about the various aspects of wind energy – information that people can spread in their communities

- **Constant and respectful contact with environmental organizations**
  - To define what is acceptable & what isn`t
  - Fact-based discussions

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Social Acceptance: Conclusions

- **Knowledge, experience and Good Practice are available**
- **But: There`s no linear algorithm for acceptance**
  - Lots of aspects to be taken into account: health, landscape, ecosystems, distributional justice, procedural design…
  - No “100% acceptance” (not desirable anyway….)
  - Difficult for example with fundamental opposition
- **Create win-win-situations**
  - Take concerns and emotions seriously
  - Take the inputs to improve the projects to everybody`s benefit
- **Interdisciplinary & cross-national approaches are helpful**
- **We need the transfer from theory into practice!**

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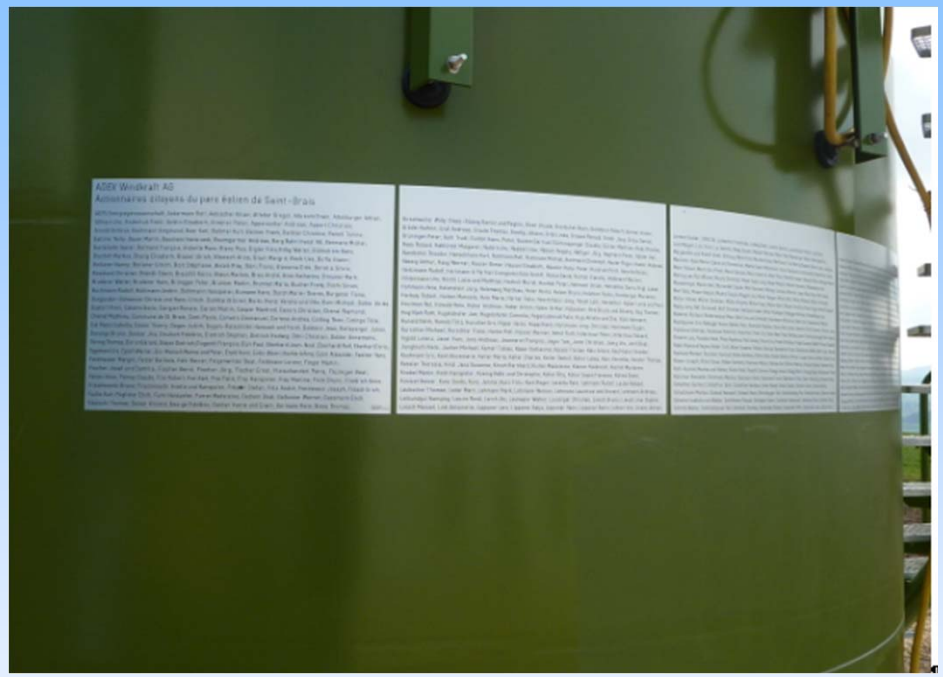
Task 28: Successes



Idea of name inscription copied in Switzerland from Japan

“We have doubled the value of knowledge by sharing”

Yasushi Maruyama, Japanese Task 28 Representative

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Thank you for your attention!

IEA Wind Task 28

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www.socialacceptance.ch