



PRO-VE 2023

24rd IFIP/SOCOLNET Working Conference on Virtual Enterprises
Resilient and Responsible Collaborative Networks

PRO-VE 2023 Special Session

Collaborative Prosumers Networks and responsibilities of Aggregators to manage uncertainty

Scope

The Covid-19, Russo-Ukrainian War, global energy crisis, problem of semiconductor supply are just a few examples that taught us the necessity to be resilient and very reactive. The resilience of energy production is also in question and collaborative energy production and consumption provide key perspectives. Both the energy crisis and the digitalization on many parts of the society, have led to a change in the energy consumption map and an increase in interest in local renewables electricity generation and energy independence. Organizing collaboratively residential prosumers into electricity trading communities confers greater benefits under certain conditions, with a reduced electricity transfer capacity than when the goal is to become electricity self-sufficient. Collaborative networks of prosumers will generate benefits for those by facilitating the exchange of information and advice, but especially achieving more leverage in the market. In addition is optimizing the energy sharing over network users reducing annual electricity cost compared to independent operation and balances uncertainty risks caused by fluctuation of energy production. However, privacy regarding physical assets and data protection can present critical barriers to prosumer sharing of information or for implementing open business models. A network of renewable energy suppliers may trade flexibility on a larger scale. A single prosumer may not have much impact in the market, but if the prosumers are organized, they may represent a significant market actor for the operators of the field. Organizing prosumer collaboration becomes a challenge, and Aggregators can be a potential organizational solution. Aggregators are often used in industries with many different suppliers or providers of similar products or services. By bringing all these sources of products, services, or information together, aggregators can help consumers make more informed choices and save time and effort in their research. They can help businesses reach a wider audience and gain more product or service exposure. Then, defining roles, best practices or even business models for Aggregators remains a fully open topic.

The objective of this session is to identify examples of good practices of collaborative prosumption activities, challenges and value co-creation solutions for a better and more sustainable economy and that may lead to obtaining sovereignty in different critical sectors like energy or agriculture. We intend to collect case studies showing the advantages of transition from prosumers focusing only on their independence from commercial value chains (*p-prosumers*) to prosumers who generate added value and social impact by adding community building to their agenda (*co-prosumers*). The session focuses also on prosumers networks and their organization. An aggregator may be part of a prosumer network, but it is also possible to find other ways prosumers can work together. And how can such networks be resilient and responsible? How can the aggregator play a role in obtaining resilience and responsibility?

Session Organizers

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Topics/ Keywords

- From energy example to other types of prosumers
- Working together and Co-creation
- Different revenue models; Cooperative as a model
- Integrating software solutions for smart aggregation, cognition and interactive visualisation
- Advantages of collaboration: negotiation power on market, strength, competence, reduced risk, trust
- Prosumer's risks and resilience
- Role and responsibilities of aggregators
- Common-pool resource management and organization principles
- Transition from *p-prosumers* to *co-prosumers* and the added value

Submission procedure

Special sessions are included in the main Conference and follow the same reviewing process.

Short abstracts submission (100-150 words): March, 27th, 2023

Full papers submission: April, 24th, 2023

Acceptance Notice: June, 5th, 2023

Final version Submission: Jun 19th, 2023

Acceptance of papers is based on the **full paper** (up to **16** pages for foundational papers). Each paper will be evaluated by three members of the International Program Committee.

When submitting on the web site, you have to indicate the name of the special session. Submission procedure via EasyChair available on: <http://www.pro-ve.org>, with copy by email to the chairs of the special session.