



Proceedings of yearly workshops towards DSOs, regulatory bodies and other stakeholders - 3rd year

*Deliverable D4.5
V1.0*

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EXECUTIVE SUMMARY

Deliverable 4.5 summarizes the various dissemination actions organized during the third year of the project in order to reach the European DSO community, the regulatory bodies, and the professional associations and public bodies related to the energy sector.

In the scope of this report the main InterFlex project events in 2019 are presented in detail.

A list of events (conferences, seminars, etc) where InterFlex members actively participated is given in chapter 3.

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1. INTRODUCTION

1.1. Scope of the document

Deliverable 4.5 summarizes the various actions organized by the project during its third year to reach the European DSO community, the regulatory bodies, and the professional associations and public bodies related to the energy sector.

1.2. Notations, abbreviations and acronyms

The table below provides an overview of the notations, abbreviations and acronyms used in the document.

CEER	Council of European Energy Regulators
CRE	French Regulation Authority (Commission de Régulation de l'Energie)
DSO	Distribution System Operator
ESCO	Energy Service Company
EC	European Commission
EC-GA	European Commission Grant Agreement
EU	European Union
GA	General Assembly
GWP	General Work Package
KPI	Key Performance Indicator
LES	Local Energy Systems
PC	Project Coordinator
SC	Steering Committee
TC	Technical Committee
TD	Technical Director
TSO	Transmission System Operator
WP	Work Package
WPL	Work Package Leader
NSV	Nice Smart Valley (French Demonstration)

Figure 1 - List of acronyms

2. MAIN EVENTS & WORKSHOPS

2.1. Special panel session on local energy systems, IEEE GTD Asia

Date	March 20-23 th 2019
Location	Bangkok, Thailand
Event url	http://www.ieeeegt-d.org/ http://www.ieeeegt-d.org/tp_panel.html#panel9
Type of presentation	Special InterFlex panel session. Title: Local Energy Systems and Grid Automation: Building the Grid from the Bottom
InterFlex participants	Marco Cupelli (RWTH Aachen), Thorsten Gross (Avacon), Christian Dumbs (Enedis)



BANGKOK INTERNATIONAL TRADE & EXHIBITION CENTRE (BITEC), BANGKOK, THAILAND

BIG SHIFT IN POWER & ENERGY

CONFERENCE : 19 - 23 MARCH 2019 | EXPOSITION : 21 - 23 MARCH 2019

The panel session focused on how Advanced Distribution Automation Systems (ADAS) and Local Energy Systems (LES) contribute to grid modernization and the importance of integration and interoperability from the utility side. Several examples have been discussed resulting from the experiences gained in the different large-scale InterFlex demonstration projects. A focus was placed on the commonalities and differences between Europe and Asia. Especially dealing with the opportunities and challenges of LES and Advanced Automation solutions.

Two key elements of grid modernization are the ADAS and LES. In the past microgrids have been extensively featured and how they contributed to shape the future grid. Microgrids are originally seen as mainly electrical in contrast to this the recent development forms Europe feature the Local Energy Systems which differ from microgrids in dimensions of size and also the integration of cross-carrier energy system. The resulting system is not anymore an electrical system but a multicarrier system. The LES perspective covers on how the role of distributed generation evolved in European DSO and how assets moved to lower voltage



level. This change impacts not only the location of the assets and the distribution of energy but also on the requirements and functionalities which the distribution automation system needs to fulfill. An industry consensus is that around 75% of the cost of ADAS implementation is integration into the existing landscape of operation technologies. Successful interoperability requires compliance with industry standards, Communication protocols and data exchange.

2.2. Aggregator workshop on local flex markets, Brussels

Date	April 11 th 2019
Location	Brussels, Belgium
Participants	DSOs: Enexis, Enedis Aggregators: ENGIE, Croonwolter&Dros, Jedlix, TNO (refer to the full participant list below)

The workshop focused on local flexibility markets and mechanisms implemented in the Dutch and French InterFlex demonstrators.

WORKSHOP ON LOCAL FLEXIBILITY MARKETS 14b Rue de la Science / Brussels April 11 th 2019		
AGENDA		
9:00- 9:30	Welcome	Contributors
09:30	InterFlex local flex markets : the NL and FR demos Description of the respective portals, actors, protocols, forecasting, data analysis	Enexis, Enedis
10:30	Market design and pricing : what influences the price, how to generate offers?	Aggregators
12:30-13:30	Lunch	
13:30	Interaction with TSO markets (which ones?) - short presentation of GOPACS, its aim	Sympower, Jedlix
14:00	Data transmission: what data needs to be available, is made available? Privacy issues for data transmission?	All
15:00	Regulatory issues (for ex. battery charge-discharge fees/taxes, etc)	Enexis, Enedis
15:30	Business perspectives after InterFlex Identification of opportunities and main obstacles	All
16:30	End of the meeting	

Figure 2 - Agenda of the aggregator workshop - Brussels

The workshop was jointly organized by Enexis and Enedis and aimed at discussing common challenges and sharing experiences with respect to the implementation of local flexibility markets. Four involved aggregators (ENGIE, Jedlix, Croonwolver&Dros and TNO) participated in the workshop, see the participant list below:

Local Flexibility Markets - Workshop - April 11th, 2019

InterFLEX

PARTICIPANTS

1	Stefan	Custers	CroonWolter & Dros	Stefan.Custers@croonwolterendros.nl	
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15	Joost	Laarakkers	TNO	joost.laarakkers@tno.nl	
16	Bob	Ran	TNO	bob.ran@tno.nl	

Figure 3 - Participant list of the aggregator workshop - Brussels

The discussions focused the following main topics:

- Value of flexibilities: considering the fact that in the participating InterFlex demonstration areas there are few grid constraints, one of the main challenges was to discuss flexibility values and market design.
- Value stacking: aggregators bid today on existing TSO markets. In which way local DSO flex markets can be complementary and represent additional sales opportunities for flex providers?
- Data privacy: in order to tap into the full potential of local flexibilities DSOs need to precisely forecast grid constraints and flexibility needs. Data access and privacy rules constitute major constraints. Recommendations were discussed on how to make metering data accessible to the stakeholders without reducing data privacy, nor the need of extensive customer consent forms, while respecting all GDPR rules.
- Financial barriers and solutions to overcome the corresponding hurdles have been discussed.



2.3. JRC (Joint Research Center)

Date	May 7 th 2019
Location	Remote (webconference)
Participants	4 Project members (Enedis, Enexis, E.ON, Accenture) 3 JRC and European Commission representatives

Four InterFlex project partners presented on May 7th, 2019 to the European Commission and the Joint Research Center (JRC) the project learnings regarding market models for local flexibility procurement.

The discussion lasted 1h30 and the attendees were:

- On InterFlex side:
 - Gregory JARRY (Accenture);
 - May-Linh OGIER (Accenture);
 - Christian DUMBS (Enedis);
 - Marcel WILLEMS (Enexis);
 - Alf LARSEN (E.ON).
- On JRC European Commission side:
 - Antonios MARINOPOULOS
 - Stamatios CHONDROGIANNIS
 - Nikoleta ANDREADOU

The Swedish and Dutch demos were particularly detailed, and the French and German demos were briefly presented as well.

The discussions particularly emphasized islanding solutions, electric vehicle smart charging client application (Enexis), integrated and market approaches and their limits, flexibility activation mechanisms and timescale and risk management processes.

The remuneration of the flexibility proposed in the Dutch demo was discussed: link with the technical coordinator, incentives for flexibility providers, technical solutions, etc.

Questions were also raised on the market approach as opposed to the direct activation of flexibility: when should one approach be preferred to another? Is the limit geographical or time related? Does it answer TSO needs only (primary reserve) or also DSO needs? The European Commission was favoring a market activation mechanism.

The overall topic of cooperation between TSO and DSO was a matter of interest for the JRC.



AGENDA

Exchanges with the European Commission -
Joint Research Centre

- 01 InterFlex Presentation
- 02 DSO Needs, Integrated & Market Approaches
- 03 Flexibility Activation Mechanisms
- 04 Value & Risk Management
- 05 Questions & Answers

2

May 7th, 2019

2.4. InnoGrid 2020+ (2019)

Date	May 13 th 2019
Location	Brussels, Belgium
Event url	https://www.innogrid2020.eu/programme/ https://www.innogrid2020.eu/projects/interflex/

At InnoGrid 2019, the annual joint conference of E.DSO and ENTSO-E, industry CEOs shared their views on innovation strategies, dos and don'ts were discussed, a debate was launched on today's rising power platforms and needed support from regulation, policy and financing. InterFlex participated in the interactive breakout sessions with other pilots and projects on active system management, sector coupling and storage, advanced grid resilience and innovations for the physical grid.



Your speaking slot

Speakers in the session:

- **Moderator:** Torsten Knop, Head of European Regulation/Projects, Innogy SE
- **Moderator:** Gerda de Jong, Market Advisor, ENTSO-E
- Luis Cunha, Head of European Affairs, EDP Distribuição
- Mathilde Lallemant, Team Lead for TSO-DSO interface and Digital, ENTSO-E
- Michael Jesberger, TransnetBW GmbH, [DA\RE](#)
- Gorge Bouladakis, European Dynamics, representing the INTERFACE project
- Miguel Pardo, Endesa, representing the [CoordiNet](#) project
- Christian Dumbs, Enedis representing the [InterFlex](#) project
- 1 professional facilitator

Figure 4 - Panel session @Innogrid2020+

2.5. Workshop Wind Europe

Date	May 14 th 2019
Location	Brussels, Belgium
Attendees	3 Project members and the System Integration working group of Wind Europe

On May 14th, InterFlex presented the project and the key findings on local markets for flexibility to the System Integration working group of Wind Europe.

The discussion lasted 1h30 and was followed by a lunch. Christian Dumbs (Enedis), Thibaut Wagner (Enedis) and Marco Cupelli (RWTH) participated in the event on behalf on InterFlex..

The agenda was the following:



Figure 5 : Agenda of May 14th Wind Europe session

The two mechanisms to activate flexibilities for the DSO were detailed: either Legal/Contractual Agreements, or market response. It was mentioned that those approaches are complementary, and can be used depending on the needs.

As an illustration for the Legal Agreement mechanism, the German (Avacon) use case was presented, and for Market Response, the French (Enedis) and the Dutch (Enexis) use cases.

2.6. InterFlex 3rd Community Meeting on Local Flexibility Markets

InterFLEX 3rd Community Meeting

Date	May 23 rd 2019
Location	Webinar
Attendees	Project Members and External Stakeholders: in total 80 attendees from 8 countries

May 23rd Community Meeting was the occasion to gather InterFlex members to share viewpoints, current project findings and market design recommendations for local flexibility market.

The event was conducted as a webinar through the BlueJeans tool and lasted 1 hour. A wide variety of stakeholders from different horizons were present: energy industry associations, DSOs, energy providers, aggregators, researchers, equipment providers, consultants and other smart grids experts.

Five InterFlex speakers shared recommendations on market design for a local flexible market:

- Christian DUMBS (Enedis)
- Marcel WILLEMS (Enexis)
- Thorsten GROSS (Avacon)
- Guillaume LEHEC (Engie)
- Grégory JARRY (Accenture)

A special guest, James Gallagher (NY State Smart Grid Consortium Executive Director) was invited to share his personal views and recommendations.

The goals of the event were multiple:

- Present project outcomes
- Share viewpoints
- Collect feedback
- Discuss future challenges
- Build InterFlex international notoriety
- Foster replicability discussions with external stakeholders
- Foster discussions on the business models being developed by InterFlex

The webinar presented the experience gained and the challenges encountered in establishing market models for local flexibility procurement.

Integrated and market approaches, their limits and business opportunities, as well as the types of mechanisms to activate flexibilities for the DSO were described. InterFlex major challenges regarding risk management, along with flexibilities price and products on a local scale were addressed.

During the webinar, the participants were able to ask their questions via the chat. Two Q&A sessions were dedicated to answer their questions.

About 80 participants joined the workshop from 8 different countries, here is a list of participants companies:

E.ON	Eindhoven University of Technology	Greenpeace Espana
SST	New York State Smart Grid Consortium	Spinpart
IBM	Centrale Supélec	Naturstrom AG
JRC	Avacon	BDEW
RWTH Aachen	Delta-ee	ElaadNL
Enedis	Croonwolter&Dros	Eidsiva Nett AS
Startgreen Capital	TNO	Flexiblepower Alliance Network
Acm	EKN	Social Impact Ventures NL
Accenture	CRE	PSL research university
Trialog	University of Ljubljana	Enexis
Encevo	Aalborg University	Rentel NV
FfE eV	DOWEL Management	

Figure 6 - Webinar Participants' companies

Webinar

MARKET DESIGN RECOMMENDATIONS FOR A LOCAL FLEXIBILITY MARKET

Cross functional Activities

TRIALOG
accenture
RWTH AACHEN UNIVERSITY
enedis

Dutch Demo

ENEXIS GROUP
TNO
Elaadnl

French Demo

enedis
socomec
ENGIE
EDF

Swedish Demo

DSR Platform
e-on
RWTH AACHEN UNIVERSITY

German Demo

Smart-Grid Hub
avacon

Czech Demo

DISTRIBUCE
DZ BANK
SIEMENS
Schneider ELECTRIC
AIT
fronius

Christian DUMBS
Project Coordinator

Grégory JARRY
Dissemination

Marcel WILLEMS
Dutch Demo

Thorsten GROSS
German Demo

Guillaume LEHEC
French Demo

& Special Advisor
James GALLAGHER
New York State Smart Grid Consortium

InterFlex explores the use of local flexibility for DSO needs through four demonstrators and shares the experience gained and the challenges encountered in establishing market models for local flexibility procurement. The webinar will present both integrated and market approaches, detailing the limits and business opportunities of each, as well as three types of mechanism to activate flexibilities for the DSO. The webinar will provide some thoughts on the value of the flexibility and how it is shared among stakeholders.

Webinar Course
(in real time)

Thursday the 23rd
of May, 2019

2.00 – 3.00 pm CET

[Link](#)

Figure 7 : InterFlex 3rd Community Meeting Brochure

2.7. Think Smart Grid workshop on microgrids (CIRED side event)

Date	June 4 th 2019
Location	Madrid, Spain
Event url	https://www.thinksmartgrids.fr/en/ https://www.eventbrite.com/e/think-smartgrids-ciired-side-event-on-the-digitization-of-utilities-registration-60804492875



Figure 8 - TSG announcement of the CIRED side event

On behalf of Olivier Grabette, member of the board of RTE and chairman of Think Smartgrids, Valérie-Anne Lecznar invited to the Think Smartgrids' side event on the digital transformation of utilities: smart grids use cases that we held during the International Conference on Electricity Distribution (CIRED) 2019 in Madrid, Spain.

The event was held on June 4th, from 6:00 p.m. - 8:30 p.m. in room N110 (North Convention Center) at the IFEMA, Av. Partenón, N° 5, 28042 Madrid.

The program was as follows:

- Welcome address - Pierre Mallet, CIRED vice chair, VP Scientific Council of Think Smartgrids, director of R&D and innovation, Enedis
- "The digital transformation of utilities: meeting the challenge of integrating data to serve networks and customers".
Study realized by The Think Smartgrids workgroup on data - DC Brain (Benjamin de Buttet, co-founder) and Cosmotech (Thomas Lacroix, CTO)
- "Digital transformation of utilities: Iberdrola's vision and achievements" - Ana Mozos Martinez, Head of Digital Technologies - Iberdrola Network Business
- Round Table on use case - Enedis (Christian Dumbs, InterFlex project coordinator), Atos (Juan Marco), Odit-e (Luc Richaud), Schneider Electric (Jean Wild).
- Q&A
- Networking cocktail

The workshop was aimed at utilities and participation was by registration only (Eventbrite).

2.8. Work session with the French regulator CRE

Date	June 17 th 2019
Location	CRE premises, Paris
Attendees	3 Project Members and 5 CRE representatives

The presentation of the project to CRE experts on June 17th allowed InterFlex to showcase the innovations developed by the different demos, thus favoring the elaboration of a regulation framework adapted to the demos' scalability.

The attendees to this session were:

- From the CRE :
 - Didier LAFFAILLE (advisor for the CRE president)
 - Basile NICOLSKY (Network - Distribution - Local Flexibilities Department)
 - Guillaume MAGNIEN (Network - Smart grids & connection Department)
 - Pierre JANISZEWSKI (Network - Coupling & market Department)
 - Anne DELAROCHE (Network - Communication Smart grids Department)
- From InterFlex :
 - Christian DUMBS (Enedis)
 - Thomas KUHN (Enedis)
 - Grégory JARRY (Accenture)

An overview of the project and of the uses cases for flexibilities was shared, including:

- the different ways to access flexibilities (bilateral contracts, market mechanisms or DSOs assets);
- the DSO needs addressed by InterFlex;
- the mechanisms tested to activate the flexibilities and answer those needs.

Then the presentation dept dive in 3 demos to illustrate specific topics, namely the flexibilities and the coupling of electricity with other energies:

- The German demo (Avacon) showcases the use of local flexibilities controlled by the DSO via the Smart Grid Hub in order to manage the constraints on the Transmission and Distribution networks. This allows the direct activation of an end user by the DSO;
- The Swedish demo (E.ON) proposes solution to optimize the multi-energies use;
- The French demo Nice Smart Valley (Enedis) tackles both the use of flexibilities to answer the future DSO needs on constraints management, and the mutualization of a battery to answer DSO needs and other market mechanisms.

The presentation was followed by a “questions & answers” phase. The CRE representatives raised questions and received the following answers:

- The demos will stop after 2019, when H2020 funding terminates, but the assets funded by the partners can still be used.
- The current market platforms developed by the demos are regionally specific, but if the solution is generalized, InterFlex advised to use a national platform.
- DSO direct activation authorization depends on the countries: it would not be possible in France, but can be in Germany, for example.

- Prior notice delays presented differ from mobilization delays, they are meant to provide contractual visibility.
- For Avacon's demo, a producer of renewable energy creating the constraint can participate to flexibility provisioning. It will be curtailed, hence neutral.
- For Avacon's demo, overconsumption is not considered.
- For E.ON's demo, the DSO manages the heating network as well as the electrical one. This business model appears to be exportable e.g. in France. A multi-fluids case with gas has been tested in the French demo, but not heating network.
- Within Nice Smart Valley (French) demo, one use case tested the mutualization of a battery between DSO and market actor needs. The CRE representatives identify a risk of competitive issue.

2.9. Eurelectric workshop

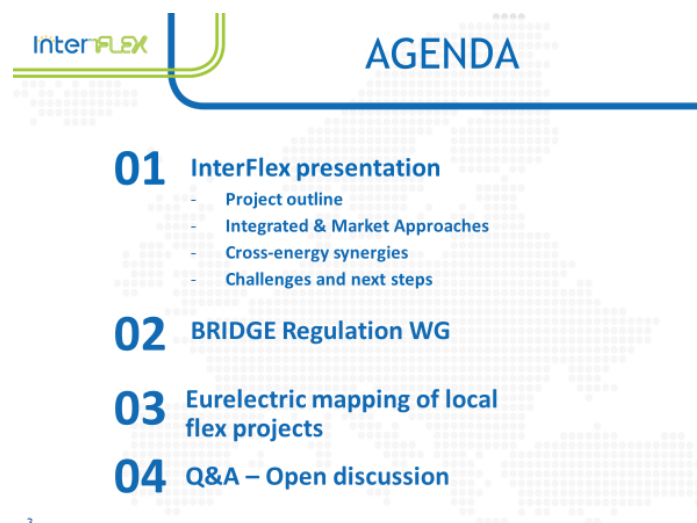
Date	September 3 rd 2019
Location	Brussels, Belgium
Attendees	5 Project members and Eurelectric representatives from the Institutional Framework working group

Interflex was invited to participate in a workshop organized by the Institutional Framework working group of Eurelectric on September 3rd.

The presentation lasted 2 hours and the attendees on InterFlex side were:

- Grégory JARRY (Accenture)
- Victor THEVENET (GRDF)
- Christian DUMBS (Enedis) by phone
- Thibaut WAGNER (Enedis) by phone
- Amiteshver MATHARU (E.ON) by phone

The agenda was:



3

Figure 9 - Agenda of the Eurelectric workshop

The development of local flexibility markets was broadly discussed: regulatory barriers, which innovation can upscale fast, how to move towards more market-based project, etc. The gas/electricity flexibilities provided by smart gas solutions were detailed by GRDF partner of InterFlex. The communication chain between the DSO, the aggregator and the final consumers was presented: the objective is to help the aggregators understanding gas/electricity flexibilities and their integration in their platform.

A focus was made on risk management to guarantee the service quality.

The project highlighted that an equilibrium must be found between the price the DSO is willing to pay and the aggregators' offers in order to have a viable market model.

Key topics addressed by the BRIDGE¹ regulation workgroup were shared, along with associated recommendations:

- How to take into account locational aspect in the market organization?
- How can DSOs provide new services to the electricity system?
- How to maximize the use of flexibilities connected to distribution grids?

Eurelectric presented a mapping of all over DSO relevant projects on local flexibility market.

Those presentations were followed by a "Questions & Answers" phase.

2.10. E.DSO project committee

Date	September 18 th 2019
Location	Warsaw, Poland
Attendees	Members of the E.DSO project committee

InterFlex' objectives were initially presented to the E.DSO projects committee, in March 2017. The presentation in September 2019 aimed at showing the project's outcome and achievements, 3 years later.

¹ BRIDGE gathers H2020 smart grid and energy storage projects to create a structured view of achievements, challenges and hurdles to overcome to foster the energy transition.



Projects Committee: September 2019

18 September 2019
09:00 – 16:00

Hotel Bristol Warsaw
ul. Krakowskie Przedmieście 42/44,
Warszawa, Mazowieckie 00-325

Agenda

09:00	Start of meeting <i>Hotel Bristol Warsaw, Kiepusa conference room</i>
	<ol style="list-style-type: none"> 1. Introduction (Richard Vidlička) 2. Presentations <ol style="list-style-type: none"> a. Presentation of PGE Dystrybucja's Innovative Projects (Seweryn Kędra – Vice-President & CFO of PGE Dystrybucja) b. Presentations of the InterFlex project (Christian Dumbs – Project Coordinator & Senior Consultant at Enedis) c. Presentation of Awesense (Mischa Steiner – CEO of Awesense) 3. E.DSO Projects – ongoing & upcoming 4. Horizon Europe (Florian Gonzalez) 5. Tour de table of E.DSO Members' projects (all Members) 6. A.O.B and wrap-up (Richard Vidlička)
16:00	End of meeting

Figure 10 - E.DSO projects committee - agenda

2.11. Special panel session InterFlex and GoFlex at EEM

Date	September 20 th 2019
Location	Ljubljana, Slovenia
Event url	https://www.eem19.eu/special-sessions/interflex/ https://www.eem19.eu/special-sessions/goflex/
Attendees	About 60 auditors - EEM conference attendees

EEM 19 **19TH INTERNATIONAL CONFERENCE ON THE EUROPEAN ENERGY MARKET**
18-20 September 2019, Ljubljana, Slovenia

InterFlex & GoFlex
– Local DSO Flexibility markets

Christian DUMBS
Enedis, France

Thibaut WAGNER
Enedis, France

Marcel WILLEMS
Enexis, Netherlands

Torben BACH-PEDERSEN
Aalborg University, Denmark

Ludwig KARG
BAUM GmbH, Germany

Zoran MARINŠEK
INEA doo, Slovenia

Ljubljana, 20 September 2019

Figure 11 - GoFlex-InterFlex joint workshop presentation

The EEM19 special GoFlex-InterFlex panel session aimed at presenting the respective project approaches to system optimisation. The GoFlex approach is a disruptive global system approach which intends to reach a combined cost optimum for all stakeholders. InterFlex is looking at short term business optimisation strategies for the DSO, based on flexibilities. The joint panel session was organized and inspired by the following table that shows the complementarity of the two projects:



Question/topic	GoFLEX	INTERFLEX
Approach	GoFlex is taking a look at the whole electric system (wholesale, TSO, DSO), considering a structure of vertically nested systems, aiming at a global cost optimum through global congestion avoidance. Based on the Harmonized Electricity Market Model in Europe.	InterFlex aims at evaluating how local flexibilities and flex mechanisms can contribute to reduce grid congestion or increase resilience (islanding), thereby optimizing the DSO business.
Approach – grid segment (i)	i) the electricity grid system within MBA (TSO territory) can be harmonized into vertically nested subsystems: <ul style="list-style-type: none"> • DSO territory • sub-DSO territory The DSO system becomes a “cellular” subsystem of the TSO system - and the DSO becomes responsible for balancing its distribution grid (= „cellular“ DSO). This responsibility is subordinated within the overall responsibility of the TSO for the complete MBA system (parental responsibility)	
Approach – market segment(ii)	ii) The market segment of the system can be structured further downwards <ul style="list-style-type: none"> • Balance Group • Sub-balance group • Local energy community • Local micro-grid system This enables introducing a local market for flexibilities, different users (roles) will offer and demand flexibilities for their purposes.	
Approach – prosumer(iii)	iii) A prosumer becomes the lowest level subsystem in the electricity market system <ul style="list-style-type: none"> • It participates actively in the local flexibility market offering its energy flexibilities • The flexibilities are specified using the generic FlexOffer model. Small FlexOffers can be aggregated into large FlexOffers before trading. 	

Question/topic	GOFLEX	INTERFLEX
The new business model of DSO	The new business model of the DSO is based on avoided costs of the TSO	Avoided costs for grid management (planning, operation, failure management, investment)
TSO vs. DSO relationship: 1. Who is the buyer of energy flexibility offered by storage prosumer 2. congestion management/avoidance and local grid balancing	Ad1 The TSO is the buyer on the TSO reserves market (MBA level), DSO is the buyer on local flexibility market (DSO territory level) Ad 2 DSO is responsible for congestion management/avoidance on its grid and for local grid balancing. Responsibility is subordinated to TSO responsibility	Ad1 DSO (and potentially other players) is the buyer of flexibility on local flexibility market Ad2 DSO is responsible for congestion management on its grid and for energy balancing in case of islanding operation (for resilience reasons or in case of specific customer requests - LECs)
Is the flexibility market operator a third party	Flexibility market operator is a separate role (=unit player). Depending on the Use case, the role can be combined with other roles in one business player, providing they are not mutually conflicting	The DSO requests flexibilities depending on local grid needs (constraints, failures). Requests are communicated to market players via a DSO-run platform. The latter also allows to select and contract (activate) flexibilities
Is there TSO-DSO cooperation for the organisation of the flexibility market	The flexibility market is organized on different levels by TSO or DSO as part of ancillary services: <ul style="list-style-type: none"> • on MBA level by TSO (minute reserves market) • on DSO system level by DSO (DSO energy flexibility market) The cooperation is executed through parental responsibility of TSO for its DSOs.	InterFlex looks into the optimisation of the DSO business by the use of local flexibilities. An explicit coordination between TSO and DSO markets, platforms or balancing mechanisms is out of the scope of InterFlex. Nonetheless, aggregators are potentially submitting their flex offers to both TSO and DSO markets: the arbitrage is driven by economic signals (flex price)
Is there DSO-DSO cooperation for the organisation of the flexibility market	There is a “Regional flexibility market” between DSOs within the same MBA. Cooperation is executed by competitive bids of involved DSOs for energy flexibility	Not in the explicit scope of the InterFlex demonstrators, which are located in the respective service areas of one sole DSO. A local flex market is bound to local grid topology and as such local DSOs.

Question/topic	GOFLEX	INTERFLEX
The price of energy flexibility: dynamic grid tariffs or localized dynamic prices	Dynamic price based on actual local conditions on the grid, based on avoided cost principle of the user of energy flexibility (DSO, TSO, BRP)	Socialised approach to grid tariffs which shall reflect the cost saving due to the use of flexibilities. No constraint-dependent tariffs for grid use.
Costs of energy flexibility transfer in the distribution grid - transfer capacity trading	The costs of energy flexibility transfer from the point of injection to the point of use should be included in the price (by implicit capacity trading)	Not within the InterFlex project scope
How can the energy flexibility be acquired by DSO (or TSO): curtailment or flexibility trading What are the time frames (Long/mid-term forecast, day-ahead, intra-day?)	By Flexibility trading on local/regional market: close to real time based on actual/short term prediction of operating states of the grid	By flexibility trading on a local scale (bound to the grid topology). Focus on long/mid-term forecasts down to day-ahead. Intraday (opportunistic) is weakening the business model (reduced to no savings if flex is not guaranteed)
Storage as a service by commercial players to the DSO (or TSO) or as an asset on the grid?	Storage as service by commercial players: storage as prosumer system (producer, consumer, prosumer). No distinction is made between virtual and explicit storage	Both approaches are tested. DSO-owned storage assets for grid-related uses, storage services provided by market players for commercial and trading activities. There are also combined approaches for shared use of a given asset (by regulated and unregulated players depending on the needs). All approaches have been tested for demonstration purposes only and do not translate a claim of the project partners for future standards or regulations.

Question/topic	GOFLEX	INTERFLEX
Type of local flexibilities experimented	<p>Demand response of any kind of appliance or generation.</p> <p>Using Explicit flexibilities: storage (including thermal storage, V2G) and Implicit storage: processes, like postponement of consumption and generation (through sector coupling, smart EV charging).</p> <p>A standardized FlexOffer format and protocol has been elaborated, which allows to focus on (deltas of) both power (kW) as well as on energy (kWh). Specifically, a FlexOffer consists of a sequence of time intervals (typically 15 min length). In each interval, the min and max power/energy amount is given, yielding the <i>energy flexibility</i> in that interval. The whole sequence can perhaps be time-shifted within an earliest start time and a latest start time, yielding the <i>time flexibility</i>. Further, <i>price flexibility</i> can be specified. FlexOffers can specify both energy supply and demand, as well as a combination. FlexOffers can be aggregated and disaggregated efficiently.</p>	<p>Grid automation (Volt-Var control)</p> <p>Sector coupling (thermal/gas)</p> <p>Battery storage (centralized and distributed)</p> <p>Demand response (customer involvement, various assets)</p> <p>E-mobility (smart charging, V2G)</p> <p>Works have been conducted on the market design of local flex offers. Compatibility of DSO/TSO offers are being evaluated.</p>
Ambition	<p>Flexibilities are regarded as energy and time flexibilities based on 15-minute-intervals, specifically as FlexOffers. Production-consumption imbalances lead to compensation actions at all levels (local, MBA, national).</p> <p>The concept of vertically nested systems enables combined bottom up and top-down action: The current bottom-up strategy where all players (local, aggregated or not) contribute shall be structured in a top-down strategy for global optimization.</p> <p>The global optimum includes the energy cost optimisation, cost of energy transfers through capacity trading</p> <p>The approach provides potential benefit to the electric system as a whole, thereby increasing social welfare.</p>	<p>Conventional DSO business relies on grid investment (reinforcement) and reconfiguration to avoid congestion, low service quality or failure. Flexibilities are regarded as 'capacity levers' to optimize the DSO business, postpone or avoid grid investments. Flexibilities provide potential benefit for both grid operation and grid planning, thereby lowering the global DSO expenses, which in return allows to lower the grid fees that are part of the customer's energy bill.</p>

Question/topic	GOFLEX	INTERFLEX
Flex Mechanisms	<p>In a vertically nested system, the DSO is responsible for balancing on a local scale, to reshape the reference load curve/profile. Flexibilities are automatically traded, based on closed contracts between prosumers-aggregators-DSO. The traded products are energy flexibilities (changed power*time), or time flexibilities (shifting the load profile in time), in time intervals of typically 15 min, expressed as FlexOffers. The flex price is a parameter within the optimisation algorithm for automated trading.</p> <p>There are two ways of trading: direct trading of individual prosumers and delegated trading of groups of prosumers with a collective business strategy (typically for small prosumers). The trading platform is run by an independent 3rd party (not the DSO nor a market player). The DSO buys aggregated services based on virtual or explicit (physical) flexibilities. The aggregator's software compiles its flex sources (expressed as FlexOffers) into variable aggregates.</p>	<p>In the current electric system, the DSO is responsible for the service quality provided to the grid customers (producers, consumers, prosumers). The DSO's job is to avoid grid congestion or failure.</p> <p>The DSO's need for flexibilities is published on a DSO-operated flex platform. Market players (aggregators during the experimentation, but potentially also larger single flex providers) place their bids on the platform and the DSO chooses the best offer based on a selection algorithm and activates the corresponding flex.</p> <p>The aggregator's software compiles its flex sources into variable aggregates.</p>
Demonstrators	<p>3 demonstrators in 3 EU countries (Cy, DE, CH) with 500 prosumers of various kinds, experimenting the same GoFlex optimisation mechanisms used in different Use cases of local flexibility markets and with various business models used by use case drivers.</p>	<p>6 demonstrators in 5 EU countries (FR, DE, NL, CZ, SE), with variable number of participants, experimenting different use cases and business models, depending on the local context.</p> <p>Local flex markets including aggregators are experimented in 2 of the InterFlex demonstrators (NL and FR).</p>

Question/topic	GOFLEX	INTERFLEX
Time horizon and hurdles to overcome	<p>GoFlex suggests an evolution of the electric system where players at all system levels are co-responsible within their system levels for the global optimisation.</p> <p>This supposes significant regulatory and organisational evolutions, but can co-exist with current structures.</p>	<p>InterFlex suggests the active use of local flexibilities by the DSO. This supposes a significant development of local flex offers, standardisation and economic incentives for flex providers.</p>
Challenges	<p>Insurance policy of the TSO: Balance groups need to be structured from the MBA/ national level down to the local level The electricity grid segment has to be structured from the MBA level /TSO territory on to nested DSO territories. The local responsibility will be nested within a global responsibility. Sufficient flexibility potential available and offered on the market is an important prerequisite The remuneration model in accordance with the avoided costs principle is to partition the network fee between TSO and DSO according to the share of congestion and balancing services (e.g. reserves) applied to solve congestion and balancing problems by responsible network operator. A refined model also allocates part of the fee for »insurance policy« by TSO for stepping in to help the responsible subordinate operator (e.g DSO) in case the DSO does not solve the problem locally.</p>	<p>Flex market liquidity: Local flex offers rely on the availability of local flex assets and contracts. A well-working market needs a minimum number of market players and offers. The create an economic interest for aggregators to offer flexibilities, flex products have to be defined and need to be compatible with DSO and TSO needs, so as to reach out to various markets. Open market offers vs. Contracts: Depending on the DSO need and the corresponding time scale (maintenance work planning months ahead, forecasted constraints D-x, day-ahead forecasting, intra-day) free market offers may or may not be compatible with the DSO's risk management. Contracts including penalties may be inevitable.</p>

2.12. Smart Energy Europe (SmartEn)

Date	September 26 th 2019
Location	Brussels, Belgium
Attendees	2 Project members and 2 SmartEn representatives

InterFlex participated in a 2 hours workshop on electric vehicle with Smart Energy Europe (SmartEn) experts taking place on September 26th.

Andres PINTO-BELLO and Michael VILLA represented SmartEn.

On the InterFlex side, the attendees were:

- Marisca ZWEISTRA (ElaadNL)
- Grégory JARRY (Accenture)

After an overview of InterFlex project (including the DSO needs, the integrated/market approaches considered, the flexibility activation mechanisms and the management of risks), a focus was made on electric vehicle flexibility.

The InterFlex Dutch demo representative, Marisca Zweistra, presented results from the demo showing that EV charging is concentrated in limited moments of the day, therefore EV could be used for provisioning flexibility the rest of the time. Power demand throughout the day with either regular or smart charging were compared.

2.13. Special InterFlex - IElectrix panel session on microgrids at IEEE PES ISGT 2019

Date	September 30 th 2019
Location	Bucharest, Romania
Special panel session	Title: ISLANDING TO REINFORCE GRID RESILIENCE IN CRITICAL AREAS: CHALLENGES ADDRESSED IN THE INTERFLEX AND IELECTRIX PROJECTS
Event url	https://site.ieee.org/isgt-europe-2019/ https://site.ieee.org/isgt-europe-2019/panels/
Attendees	IEEE PES conference attendees

The 2019 IEEE PES Innovative Smart Grid Technologies Europe (ISGT-Europe) was sponsored by IEEE Power & Energy Society (PES) and University POLITEHNICA of Bucharest, Romania. It was held at University POLITEHNICA of Bucharest, Romania from September 29 to October 2, 2019. The conference theme 2019 was “New Businesses for Energy Transition”.



The IEEE ISGT Europe conference is one of the two IEEE PES flagship conference organized in Europe and has established a strong reputation of the last years. It focuses on industrial and manufacturing theory and applications for the wide use of information and communication technologies and integrated renewable and distributed energy resources on the electric grid.

ISGT Europe 2019 focused explicitly on the latest trends and emerging and innovative technologies for grid modernization.

InterFlex and IElectrix are two EU-funded H2020 projects which aim at optimising the distribution grid based on the use of local flexibilities. The two projects explore a wide range of distributed solutions through DSO-coordinated demonstrators. Enedis and E.ON are involved in both InterFlex and IElectrix and investigate the implementation of microgrids and disconnectable electric island systems.

LIST OF CONTRIBUTORS

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IEEE PES Panel InterFlex & IElectrix

**ISLANDING TO REINFORCE GRID RESILIENCE IN CRITICAL AREAS:
CHALLENGES ADDRESSED IN THE INTERFLEX AND IELECTRIX PROJECTS**

Bucharest, September 30th, 2019

2.14. European Utility Week 2019 - booth at the EU project zone

Date	November 12-14 th 2019
Location	Paris, France
Event url	https://www.european-utility-week.com/exhibit/-topics-/eu-projects-zone#/ https://www.european-utility-week.com/eu-projects-zone/meet-the-projects-interflex#/

After a first participation in 2017, InterFlex attended the European Utility Week for the third time in 2019, with a project pod on the EU project zone.





Figure 12 - Design of the EU Project Zone - EUW 2019

Christian Dumbs, InterFlex' Project Coordinator, had the opportunity to present the project, and more specifically aspects related to TSO-DSO coordination, during a dedicated panel organised by Mark van Stiphout, DG Energy:

<https://www.european-utility-week.com/hub-sessions-programme/panel-financing-the-energy-transition-problems-and-solutions#/>

Panel: Financing the energy transition problems and solutions

SESSION

The New Innovation Paradigm

TRACK

● Initiate! - Theatre 2

HUB SESSIONS PROGRAMME

📅 13-Nov-2019 ⌚ 12:30 - 13:00 📍 Initiate! Theatre 2

Moderator



Mr Mark van Stiphout, Deputy Head of Unit - DG ENERGY, European Commission

Panelists



Dionysis Papachristou, Electrical Engineer NTUA, Scientific Expert Coordinator of RES Auction Team
Energy - Greek Regulatory Authority for Energy



Manuel Serrano, Project Manager - ETRA I+D



Nathalie Grisey, OSMOSE Project coordinator - RTE



Gareth Taylor, Professor - Brunel University



Christian Dumbs, Technical Division, DSO Program, Senior Consultant - Enedis



Uroš Salobir, Director of Strategic Innovation Department - ELES, d.o.o



Rune Kirt, CEO, Co-founder - Kirt x Thomsen

Figure 13 - Speakers of the TSO-DSO coordination panel @EUW - Initiate! Hub

2.15. Side-event EUW 2019 - GoFlex - InterFlex workshop

Date	November 12 th 2019
Location	Paris, France
Attendees	Upon invitation ; attendees of the European Utility Week

The debate focused on the following questions and topics:

- Are local flexibilities the right solution to resolve local grid challenges?
- How can local and regional platforms link to existing energy and balancing markets and what are the roles of TSOs, DSOs, aggregators and other players of the energy domain?
- What kind of policy and regulation support is needed to exploit the full potential of local flexibilities?


GoFLEX
InterFLEX
**European
Utility Week**

12-14 November 2019 | Paris, France

Flexibilities for a stable energy system: don't talk - start harvesting!

Workshop with DSO associations on the role of local flexibilities for stabilising the grid
 When: November 12, 2019, 16:00 - 18:00
 Where: European Utility Week, Paris Expo Porte de Versailles, room Espace 2000 C

Figure 14 - GoFlex-InterFlex side event @EUW2019

2.16. CEER H2020 workshop

Date	November 22 nd 2019
Location	Brussels, Belgium
Attendees	5 InterFlex project members, 3 European Commission representatives and 16 CEER members

The Distribution System working group of the Council of European Energy Regulators (CEER) invited InterFlex, and 3 other H2020 funded projects CoordiNet, InterRRface and Sogno, to present their respective projects and main outcomes. The workshop generated an open discussion on potential issues and needs for the next regulation.

The session took place on November 22nd and lasted 2 hours.
 More precisely, there were 32 attendees from the following organisations:

Project / organisation
InterFlex – Enedis, Accenture, GRDF, ENGIE
CoordiNet – TecNALIA, ENEL, iit comillas, Vito
INTERRRFACE – Elering, Fingrid
SOGNO (2p)
Commission (3p)
ACM
Ofgem
EV
ACM (2p)
BNetzA (2p)
CREG

E-Control
ERSE
HERA
ILR
NVE (2p)
Ofgem
CEER Secretariat

The InterFlex project highlighted that the technical solutions used by the demos had proven to be ready and efficient, and stressed the need for regulation to ensure value stacking of flexibilities. To support the development of flexibility for local use, simple mechanisms and few restrictions should be aimed at, thus ensuring consumer acceptance and lowering operation costs. The project suggested to provide financial incentives for tools, process and flexibility portfolio development during the transition phase. Finally, InterFlex mentioned the DSO need to access the smart meter data required to operate the local flexibility mechanism, e.g. for an accurate forecasting of flexibility needs at local scale.

2.17. InterFlex Closing Event

Date	November 28 th 2019
Location	Paris, France
Attendees	Upon invitation; InterFlex project members and external stakeholders ~110 attendees in total

The InterFlex closing event with external stakeholders was held in Paris on November 28th, 2019. Here's the agenda of the day:



09:15 Welcome coffee

09:45	Welcome speech	P. Monloubou, CEO, Enedis
10:00	The EU's initiatives to transform grid operation	M. van Stiphout, Deputy Head of Unit at DG Energy, European Commission
10:15	Nice Smart Valley, the metropolitan area of Nice and Lérins islands	F. Bruneteaux, Vice president South Region, Member of Cannes Municipal Council
10:30	Keynote Address	C. Buchel, Chairman of the InterFlex Steering Committee, President of E.DSO4SmartGrids
10:45	Round Table What hurdles need to be overcome to make the local use of flexibilities become a reality?	M. Kaune, E.ON T. Van Cuijk, Enexis Y. Bartier, Enedis R. Vidlička, CEZ J. Malka, Engie
11:45	Demo results and lessons learnt presented by the respective demo leaders Local Flexibility Markets - Enexis Demand Response and customer empowerment - Avacon	

12:30 Lunch

13:45	Demo results and lessons learnt presented by the respective demo leaders Smart Function & Grid automation - CEZ Distribuce Cross Energy Carrier Synergies - E.ON Multi-service storage and islanding - Enedis	
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15:00 Coffee break

15:30	Round Table How can active customers, local energy communities & flexibility platforms drive the Energy Transition?	
16:30	Conclusion and Outlook	R. Vidlička, CEZ - A. Jourdain, Enedis

16:45 Closing cocktail

Moderated by Christian Dumbs
InterFlex project coordinator



Figure 15 - InterFlex closing ceremony - agenda

More than 100 participants representing the European energy sector (the EC, European DSOs, regulators, aggregators, equipment manufacturers, academia, etc.) gathered to share thoughts and to have a vivid discussion on innovations leading towards tomorrow's energy system.



During the day the project members released the project summary brochure which is available on the project website under <https://interflex-h2020.com/>.

It summarizes the 5 project innovation streams, while underlining achievements, challenges and recommendations.

It also presents the 6 demonstrators of the project as well as the global work package WP3 on different cross demo analysis topics such as scalability and replicability, API implementation, interoperability testing results, Cost Benefit Analysis, etc.

During the event the InterFlex project video allowed to share distinct views of the different demonstrators and work packages.

Part 1 : <https://vimeo.com/376866806> Part 2: <https://vimeo.com/377025011>

Impressions of the closing ceremony were captured in a dedicated video: <https://vimeo.com/378267731>

2.18. InterFlex webinar on Demand Response and Sector Coupling

Date	December 12 th 2019
Location	Webinar, organized by Engerati
Webinar url	https://www.engerati.com/energy-retail/dsos-as-enablers-for-local-flexibility-the-interflex-experience/
Attendees	Upon invitation; InterFlex project members and external stakeholders ~65 attendees in total

The last official InterFlex dissemination event took place on Thursday Dec 12th from 2pm to 3pm London time: a 1-hour Webinar on the following 2 topics

- Demand Response & Customer Empowerment
- Cross Energy Carrier Synergies (sector coupling).

Speakers have been:

- Thorsten Gross (Avacon, DE)
- Helen Carlström (E.ON, SE)
- Guillaume Lehec (ENGIE, FR)

and the PC for the introduction.

The screenshot shows the Engerati website header with navigation links: ENERGY RETAIL, ENERGY GENERATION, SMART INFRASTRUCTURE, TRANSMISSION & DISTRIBUTION. Below the header is a secondary navigation bar with links: Articles, Webinars, Downloads, Companies, Blogs, Events, Videos, and a search icon. The main content area features the title 'DSOs as enablers for local flexibility – the InterFlex experience' in large, bold text. Below the title is a short paragraph: 'InterFlex investigates the use of local flexibilities to relieve existing and future distribution grid constraints. The project covers flexibility procurement, management and activation mechanisms in the aim of fostering the development of an increasing share of renewable energies on the distribution grid.' Below this paragraph is a date and time indicator: '12 Dec 19 • UK 2:00 pm'. At the bottom of the announcement is the Engerati logo and a 'Share:' button with social media icons for LinkedIn, Twitter, Facebook, and YouTube. The InterFlex logo is prominently displayed at the bottom of the page.

Figure 16 - Engerati webinar announcement

3. LIST OF EVENTS WITH ACTIVE INTERFLEX PARTICIPATION

The table below summarizes the major events in 2019 where members of the InterFlex project participated actively through oral or poster presentations, round table participations, panel sessions, site visits, etc. To avoid repeated description, the events described in the previous chapter 2 of this deliverable have not been included in the table.

Name of the event	Place	Date	Involved Partners	Link
SAP LAB group Visited the showroom NSV	Nice, France	07/01/2019	Enedis	
Upper Secondary School (sustainability week)	Simrishamn, Sweden	15/01/2019	E.ON	
The 4 th annual ancillary services and demand response	Berlin, Germany	18/01/2019	Avacon	Link
Sweden Municipality (Karlskrona) visited Simris Demo	Simris, Sweden	18/01/2019	E.ON	
8th Smart Communications & Technology Forum	Warszawa, Poland	21/01/2019	CEZ Distribuce	Link
Direction of Euro-Mediterranean Commission visited the showroom NSV	Nice, France	21/01/2019	Enedis	
Training in eco-gestures and flexi-gestures for employees of the Augier company	Carros, France	23/01/2019	EDF	
Yannick Tranchier (MEF Moscow) visited the showroom NSV	Nice, France	29/01/2019	Enedis	
E-World, Essen (European trade fair for water & energy)	Essen, Germany	05/02-07/02/2019	E.ON	
Sequelec Committee visited the NSV showroom	Nice, France	06/02/2019	Enedis	
Mayors and Elected representatives of Alpes Maritimes region visited NSV showroom	Nice, France	08/02/2019	Enedis, GRDF, EDF	
Move London	London, UK	12/02/2019	Elaad	Link
Valérie Anne LENCZNAR (Think Smart Grid) visited the NSV showroom	Nice, France	14/02/2019	Enedis, GRDF	
Chalmers University visited at Simris Demo	Simris, Sweden	21/02/2019	E.ON	
Rotary Club Cagnes Sur Mer visited the NSV showroom	Nice, France	25/02/2019	Enedis	
NKL site visit Interflex; 25 Belgian EV experts from knowledge institute	Eindhoven & Arnhem, Netherlands	20/02/2019	Enexis, Elaad	
Christian Tordo invited NCA and Flexgrid delegation at the NSV showroom	Nice, France	01/03/2019	Enedis	
Business Finland visited Dutch pilot projects	Amsterdam, Netherlands	05/03/2019	Elaad	
A group of high school students visited the showroom NSV	Nice, France	07/03, 19/03, 20/03/2019	Enedis	
NSV was present at BRIDGE	Brussels, Belgium	12/03-13/03/2019	Enedis, ENGIE	
Presentation of INTERFLEX - Dutch Pilot in BRIDGE session 4: Smart charging for electro-mobility	Brussels, Belgium	13/03/2019	TNO	Link
Energy 4 Smart Mobility	Marseille, France	14/03/2019	Elaad	Link
Hitachi and ENGIE site visit with respect to flex. Aggregator platform	Arnhem, Netherlands	20/03/2019	Elaad	
Members of Korea Hydro nuclear Power visited the showroom NSV	Nice, France	29/03/2019	Enedis	
Inauguration of the cogeneration unit	Nantes, France	29/03/2019	GRDF, EDF	
City-zen days	Amsterdam, Netherlands	02/04/2019	Elaad	Link
Members of the political party "Centerpartiet" visited the Simris demo	Simris, Sweden	02/04/2019	E.ON	

Press conference with Economix medias in the showroom NSV	Nice, France	03/04/2019	Enedis, ENGIE, GRDF, EDF	
Presentation for Alliander energy transition team	Arnhem, Netherlands	04/04/2019	Elaad	
Visit Enedis; presentation project results	Arnhem, Netherlands	05/04/2019	Elaad	
Jean Bernard Lévy (CEO EDF), Philippe Monloubou (CEO Enedis), C. Estrosi (Mayor of Nice) visited the showroom NSV and discovered the results of the project	Nice, France	05/04/2019	Enedis, EDF	
Métropole and TCO of Reunion island delegation visited the showroom NSV	Nice, France	10/04/2019	Enedis	
Powerpitch DSO Stedin	Rotterdam, Netherlands	18/04/2019	Elaad	
MBA CIFE students visited the showroom NSV	Nice, France	18/04/2019	Enedis	
CCI filière energie visited the showroom NSV	Nice, France	29/04/2019	Enedis	
SDG Ideation workshop	Amsterdam, Netherlands	09/05/2019	Elaad	
Salon ever Monaco	Nice, France	09/05/2019	Enedis	
The FNCCR president visited the NSV showroom	Nice, France	10/05/2019	Enedis, EDF	
Russian Investor & EDF Moscow visited the Showroom NSV & Battery on Lérins Island	Nice, France	15/05-16/05/2019	Enedis	
EES	Munich, Germany	15/05-17/05/2019	Socomec	
EDF Operations Director and the Associate MED Trade Director visited the NSV showroom	Nice, France	17/05/2019	Enedis, EDF	
EVS32 Lyon	Lyon, France	19/05/2019	Elaad	Link
Hybrid power systems workshop	Crete, Greece	22/05-23/05/2019	Socomec	
Meeting TU/E with RWTH and TU Twente	Eindhoven, Netherlands	24/05/2019	Enexis, RWTH	
Presentation of 2 CIREP papers at Dutch Power	Arnhem, Netherlands	24/05/2019	TNO	
CIREP 2019	Madrid, Spain	03/06-06/06/2019	Enedis, Enexis, Cez Distribuce, TNO, RWTH	
Workshop & site visit with E.ON - presentation of WP6 solutions	Hradec Kralove & Zamberk, Czech Republic	11/06/2019	CEZ Distribuce, E.ON	
Interflex Technical Committee visited the Batteries in Carros & Lérins Island	Nice, France	12/06-13/06/2019	Interflex TC	
RTP Enedis visited the showroom NSV	Nice, France	13/06/2019	Enedis	
Federation of Electricity Companies of Japan and Mitsubishi Research Inst visited the Simris demo	Simris, Sweden	17/06/2019	E.ON	
Roadmap conference	Portland, USA	18/06/2019	Elaad	Link
EUSEW	Brussels, Belgium	18/06/2019	Elaad	Link
The Pangea Project (Australia)	Simris, Sweden	20/06/2019	E.ON	
RTRP of North Carolina visited the showroom NSV	Nice, France	23/06/2019	Enedis	
Innogaz 2019	Paris, France	26/06/2019	GRDF, ENGIE	Link
Industrial Policy makers team of Enedis visited the showroom NSV	Nice, France	28/06/2019	Enedis	
B2B EDF experiment members visited the NSV showroom	Nice, France	02/07/2019	Enedis, EDF	
Grid access unit Enedis Antibes visited the showroom NSV	Nice, France	03/07/2019	Enedis	
Panel discussion at Almedalsveckan (The Politics Week in Almedalen, Visby, Sweden)	Visby, Sweden	03/07/2019	E.ON	
City of Vilnius and metropole NCA visited the showroom NSV	Nice, France	04/07/2019	Enedis	

"Journées Ingenieurs Efficacité Energétique"	Nantes, France	04/07/2019	GRDF	
Think Smart Grid + Singapore Power visited the showroom NSV	Nice, France	05/07/2019	Enedis	
Inauguration Lérins Grid with David Lisnard (mayor of Cannes)	Cannes, France	16/07-17/07/2019	Enedis	
Enedis Pyrénées Region Management and Engineering School representatives visited the French demo site	Nice, France	16/07/2019	Enedis	
INDIN 2019 - Special Session	Helsinki, Finland	22-25/07/2019	RWTH	Link
International Delegation visited the French demo site	Nice, France	05/08/2019	Enedis	
SEST 2019	Porto, Portugal	09/09/2019	Cez Distribuce	Link
Press Dircom Enedis visited the French demo site	Nice, France	11/09/2019	Enedis	
Programme NMCR visited the French demo site	Nice, France	26/09/2019	Enedis	
Information meeting with SmartEn	Brussels, Belgium	26/09/2019	ElaadNL	
Storage Club	Nice, France	27/09/2019	Enedis, Socomec	
Presentation for Energyprofs	Eindhoven, Netherlands	27/09/2019	Enexis	
ISGT Bucharest	Bucharest, Romania	29/09/2019	Cez Distribuce	Link
Smart grid flexibility conference	London, UK	01/10/2019	Enexis	
FNCCR Congress	Nice, France	01/03-03/10/2019	Enedis, EDF, GRDF	
Ecomobiel	Eindhoven, Netherlands	09/10/2019	ElaadNL	Link
Chinese delegation MNC visited the showroom NSV	Nice, France	14/10/2019	Enedis	
IECON 2019 - Special Session	Lisbon, Portugal	14/10-17/10/2019	RWTH	Link
Quebec delegation + Capenergies visited the showroom NSV	Nice, France	16/10/2019	Enedis	
Charging and Energy Conference	Munich, Germany	16/10/2019	ElaadNL	Link
Chinese delegation visited the showroom NSV	Nice, France	17/10/2019	Enedis	
Workshop EASE "Storage on islands"	Brussels, Belgium	21/10/2019	Enedis	
Workshop on Flexibility Markets and TSO-DSO Cooperation	Brussels, Belgium	24/10/2019	Dialog	
Charin Festival	Arnhem, Netherlands	30/10/2019	ElaadNL	Link
CK CIRED 2019	Tabor, Czech Republic	06/11/2019	Cez Distribuce	Link
IMREDD students visited the showroom NSV	Nice, France	07/11/2019	Enedis	
EUW2019 : presentation of NSV on "French Pavillon"	Paris, France	12/11 - 14/11/2019	Enedis, GRDF	
ATZ Live	Stuttgart, Germany	12/11/2019	Elaad	Link
EUW 2019 - Dialog chairing Panel discussion in the Digitalising the energy sector: the "greening by design" paradigm session	Paris, France	13/11/2019	Dialog	Link
CCI + TOYOTA delegation (Japan) visited the showroom NSV	Nice, France	18/11/2019	Enedis	
Thank you evening of EDF NSV members with mayor of Carros	Carros, France	22/11/2019	EDF	
"Club Climat Energie Saint Quentin en Yvelines" - presentation of NSV results and participation in a panel sessions on prosumers	Saint Quentin en Yvelines, France	26/11/2019	Enedis, ENGIE	
Enedis Stakeholders Council visited the showroom NSV	Nice, France	27/11/2019	Enedis	

Asam conference	Dresden, Germany	10/12/2019	Elaad	Link
Energaia, panel session on storage business models, presentation of NSV results	Montpelier, France	11/12/2019	Enedis	
Interflex closing WP7 Netherlands symposium	Eindhoven, Netherlands	10/12/2019	Enexis, TNO, ElaadNL	

Figure 17 - List of other events with active InterFlex participation