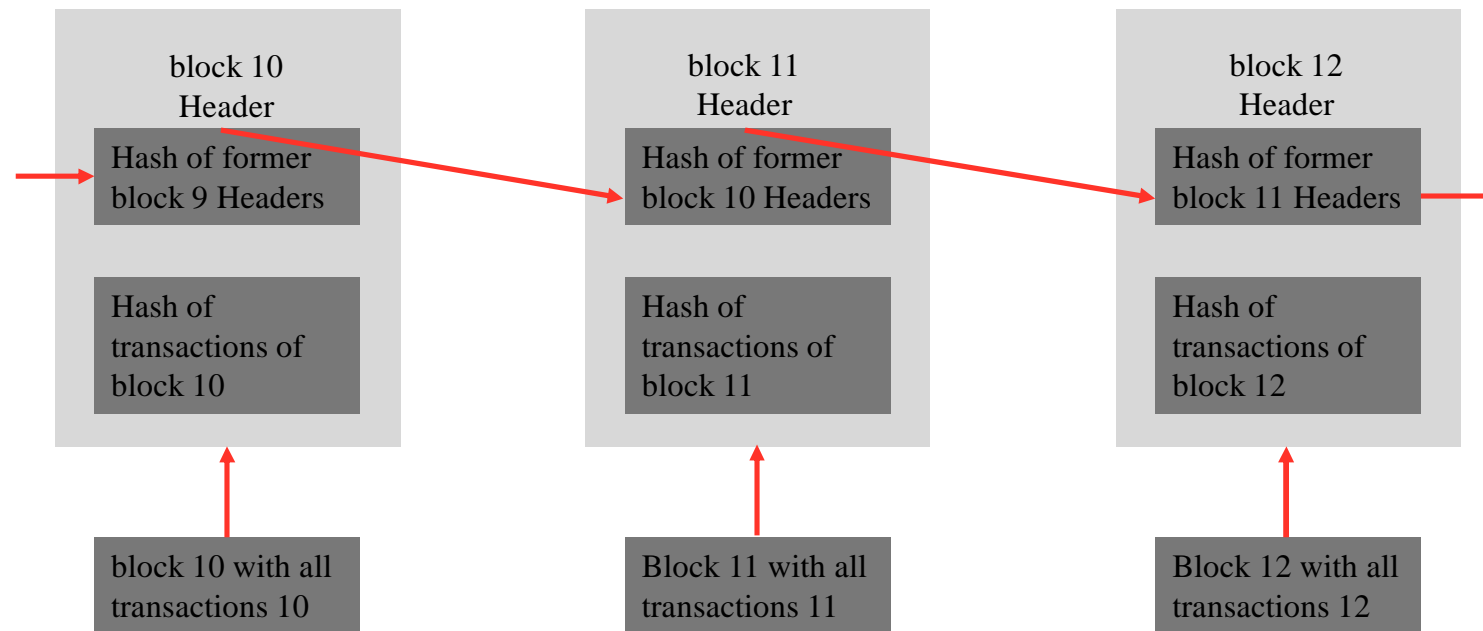


Dr. Carmen Schneider
**Blockchain in the energy sector –
regulatory framework and future potential**

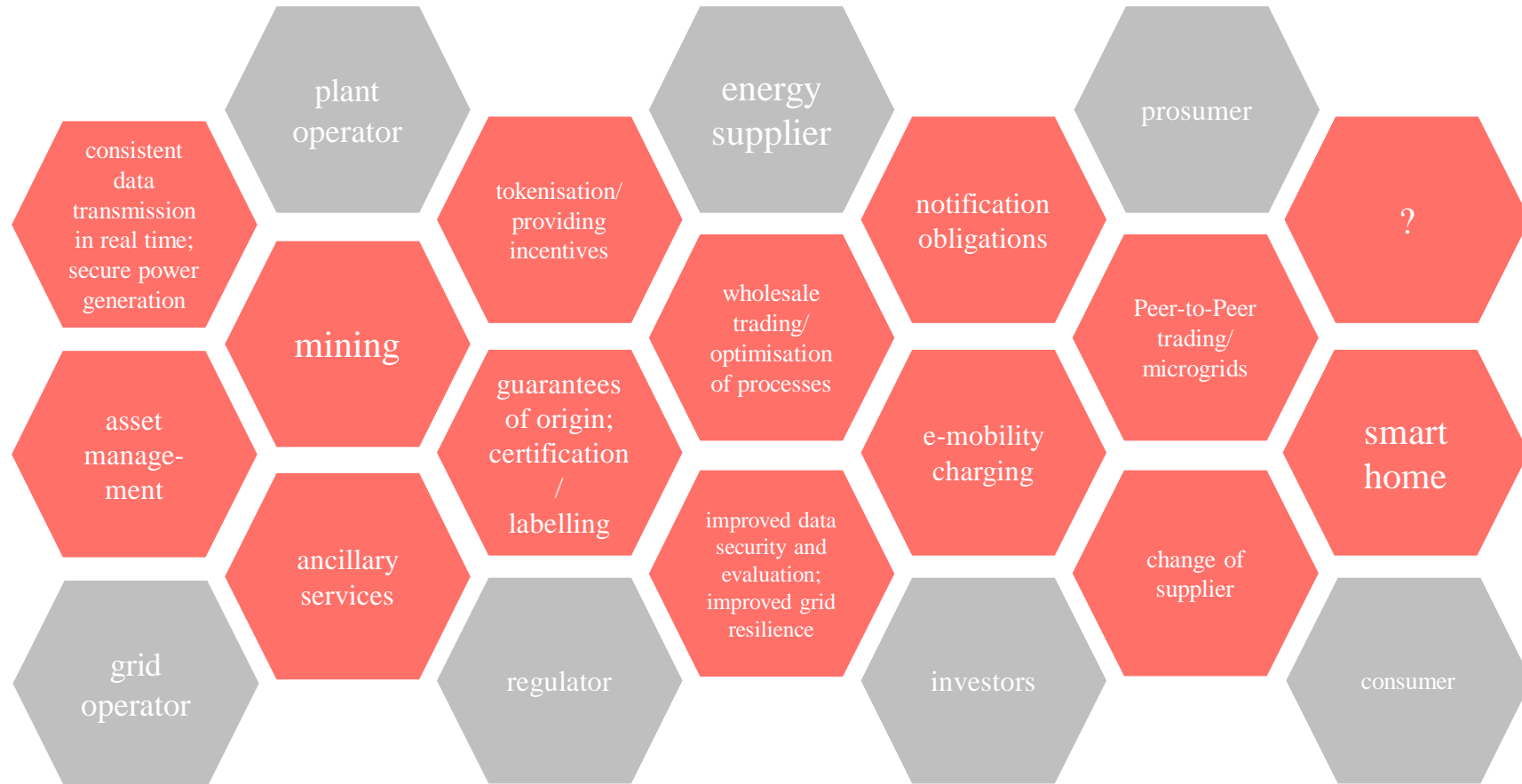
WINDFORCE Conference 2019
Bremerhaven
22 May 2019

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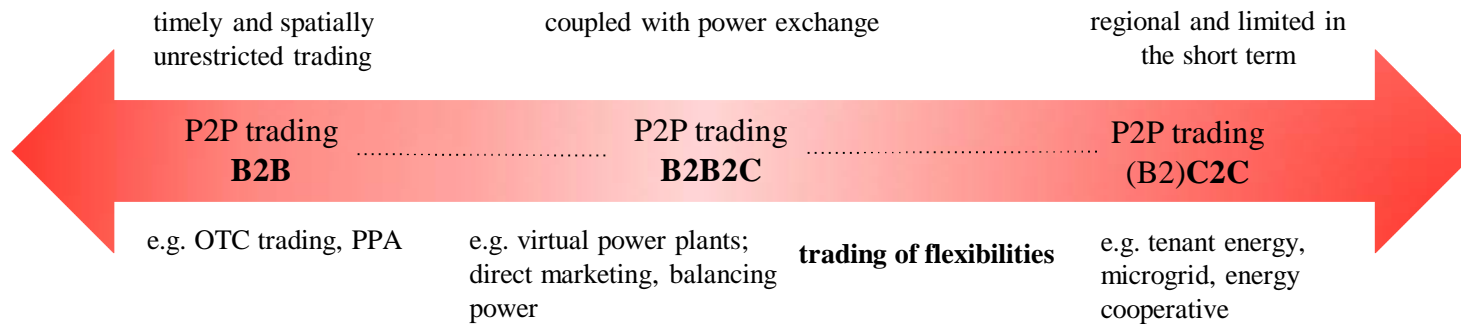
Blockchain – What's the deal with it?



Potential of Blockchain in the energy sector



Focussing on the peer-to-peer aspect



Enerchain 1.0 – live since 20 May 2019

P2P energy communities; crypto-cooperative

micro-PPA

UrKraft



GSy
D3A

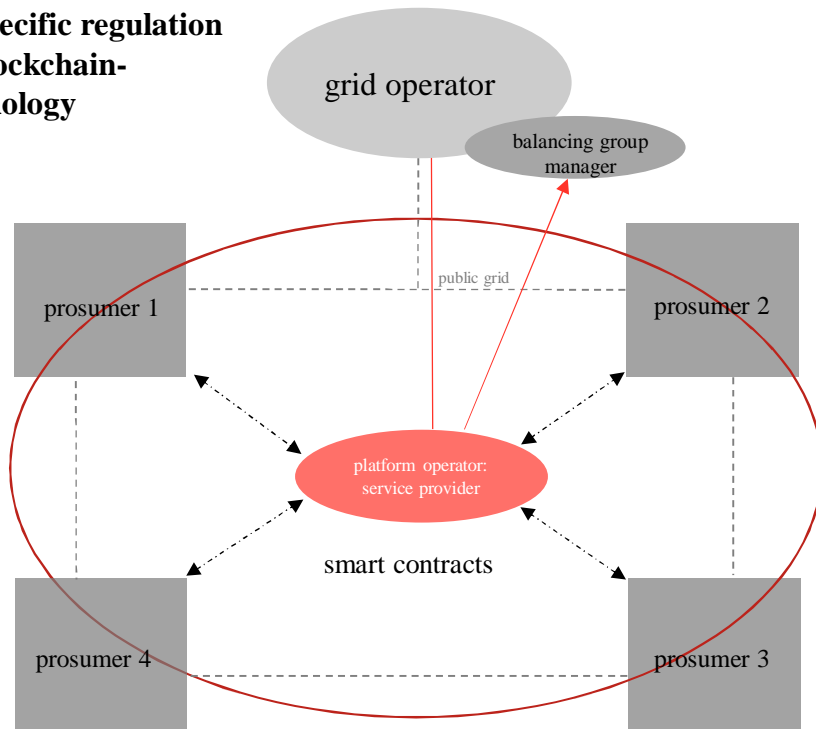
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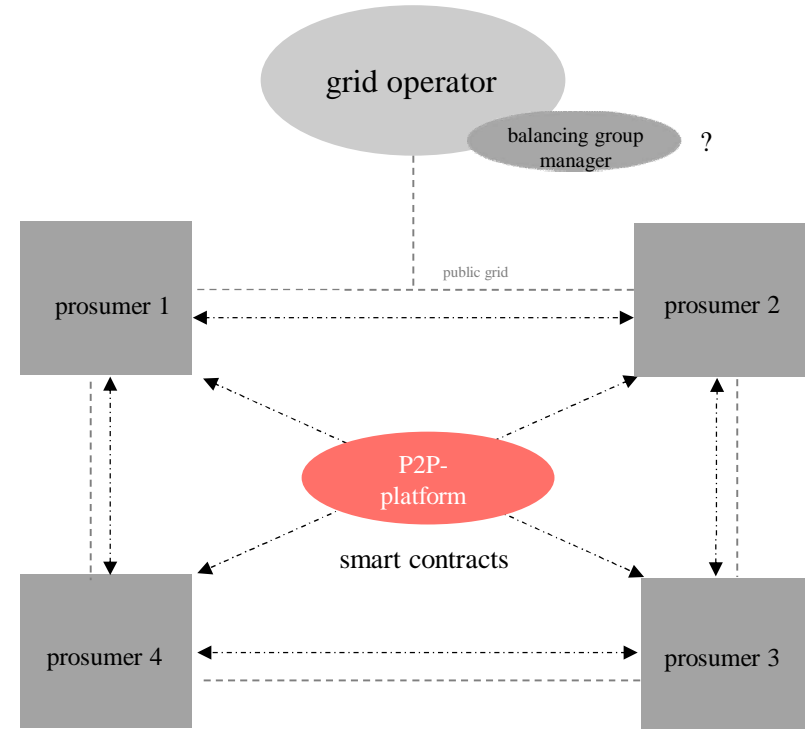
P2P-Trading

STATUS QUO

no specific regulation
of Blockchain-
technology



TARGET



Legal challenges under applicable German law

regulatory (P2P)	general civil law	other
<p>prosumer</p> <ul style="list-style-type: none"> as energy/electricity supplier acc. to EnWG/EEG legal definition/own role? 	<p>legal status?</p> <p>conclusion of contract, reversal of contract</p> <p>choice of law</p>	<p>no legal definition of Blockchain</p> <ul style="list-style-type: none"> governance and corporate law
<ul style="list-style-type: none"> publication-, notification and storage obligations (EnWG, EEG, MaStRV, REMIT); 'MaKo2020' 	<ul style="list-style-type: none"> law on Ts & Cs (also applying to smart contracts? pain point: who is user? Cut off of defenses and counterclaims) 	<ul style="list-style-type: none"> GDPR, BDSG, TMG; IT-security
<ul style="list-style-type: none"> legal prerequisites for the content of energy supply contracts, sec. 40 ff. EnWG (term, adaption of prices, termination, liability, dispute resolution) 	<ul style="list-style-type: none"> voidability, revocation, right to withdraw, change of contract <ul style="list-style-type: none"> – pain point: general stability of Blockchain; normative questions – 'reverse transactions'? 	<ul style="list-style-type: none"> permit acc. To Banking Act 'KWG'? legal classification of token MiFID II
<ul style="list-style-type: none"> Who is balance group manager? '<i>market premium balancing group</i>' pre-qualification for German balancing energy market; StromNZV 	<ul style="list-style-type: none"> liability: <ul style="list-style-type: none"> – for an incorrect code? – for the correct application of the code? – in case of defective/non- performance? – Does Blockchain need law? 	<ul style="list-style-type: none"> BSIG and BSI-KritisV (IT-security of critical infrastructures) MsbG
<ul style="list-style-type: none"> Who is metering point operator? 	<ul style="list-style-type: none"> warranty – enforcement <ul style="list-style-type: none"> – under smart contracts 	<ul style="list-style-type: none"> tax law
<ul style="list-style-type: none"> change of supplier? 	<ul style="list-style-type: none"> certification of smart contracts? 	<ul style="list-style-type: none"> cartel and competition law

Blockchain-Governance and corporate law

Is the administration and management of a Blockchain governed by German corporate law?

- common purpose vs. individual interest
 - Blockchain as '*public good*'
 - users are no percentage community (*Bruchteilsgemeinschaft*)
 - users don't do each other a favour
- absence of a binding will under corporate law to promote a common purpose (anonymity of the Blockchain!)
- use of the Blockchain does not establish a horizontal contract between users
- interaction of the individual nodes = technically prescribed behaviour; code is law
- result: corporate law is neutral towards a pure participation in a Blockchain

Smart Contracts – in a nutshell

conclusion of contracts via usage of smart contracts

- no contract in the legal sense; execution of what has been agreed in a legal contract
- but: code, allowing an automated execution of transactions by means of predefined rules („*If...*, *then...*“)
- performance and consideration are laid down in a software which autonomously checks the contract and, if so, autonomously takes measures in case of problems
- smart contract therefore maps actual events (*'right/wrong'*)
- prerequisite: the computer program is able to automatically check, whether the parties fulfill their duties (operating principle: vending machine); no discretionary decisions

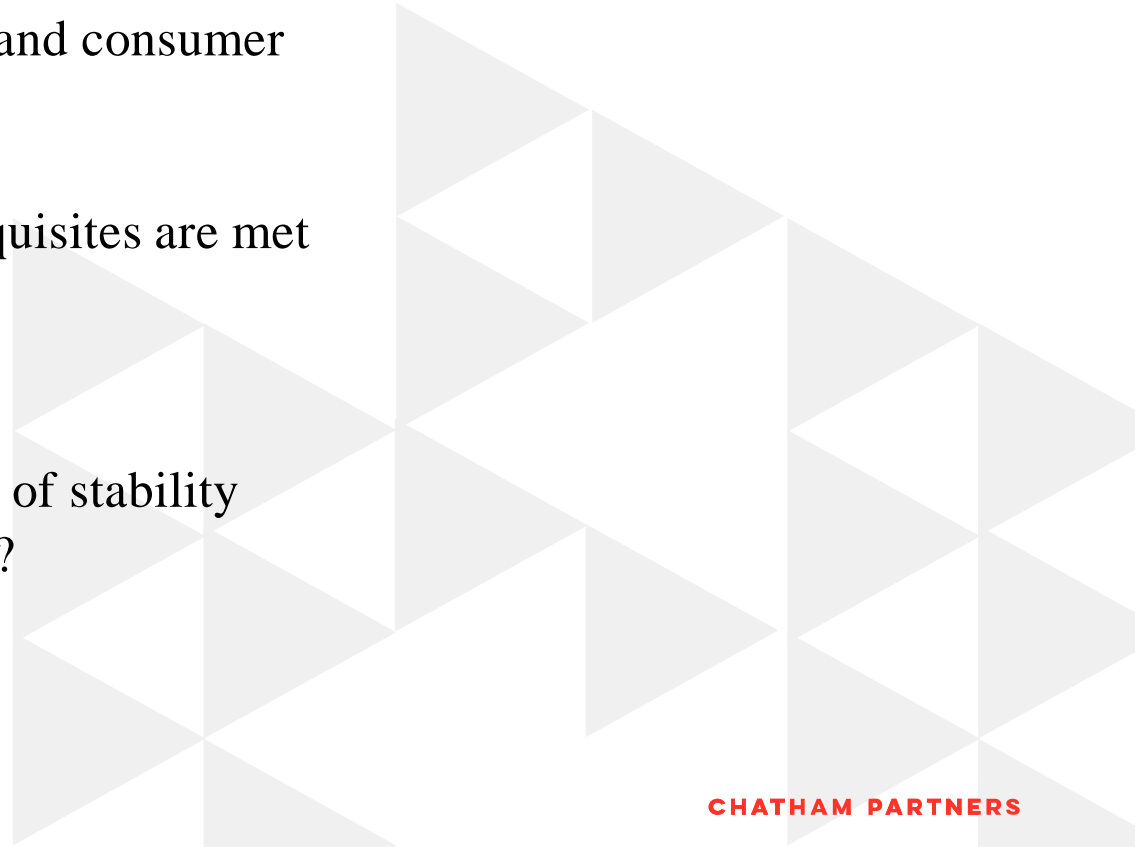
Smart Contracts – advantages und pain points

Pros

- direct supply contract between prosumer and consumer
- transaction security
- automated execution of agreed services
- no groundless refusal of services if prerequisites are met
- (cost)efficiency; acceleration

Cons

- no assessment, no discretion ↔ principle of stability
- Who shall be liable for an incorrect code?



Dr. Carmen Schneider

Partner



Dr. Carmen Schneider is a partner with Chatham Partners LLP. She advises market participants on all aspects of energy law with a focus on project development in the energy sector, in particular regarding renewables and decentralised supply models (contracting, storage concepts, tenant energy and self-supply). Besides, Carmen advises on energy contract law, in the field of energy trading as well as regulatory. Recently, Carmen advised on the implementation of Blockchain-based solutions in the energy sector (e.g. Peer-2-Peer platforms). She is a member of the energy committee of the German Federal Blockchain Association.

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Any Questions?



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**Thank you very much for your
attention!**