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# Data Driven Business Models


## Ashwin Kedia – VP Strategy & Business Development

# THOSE WHO HAVE RELIED ON PHYSICAL BARRIERS HAVE FALLEN PREY TO THE INTERNET

Entertainment, consumer electronics, mobile…

Retail and Advertising

Telecommunications

Autos …

What next? Energy?

Marc Andreessen

*Developer of Mosiac and co-founder of Netscape Communications*

# *"Why Software is Eating the World"*

*- August 2011*

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Uber

$46.30B

$55.30B

$53.67B

$63.07B



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airbnb

~$30.0B

Marriott INTERNATIONAL

$43.07B

Hilton HOTELS & RESORTS

$27.70B

HYATT HOTELS & RESORTS ®

*Feel the Hyatt Touch*

$7.87B

# Energy industry is in the midst of massive transformation

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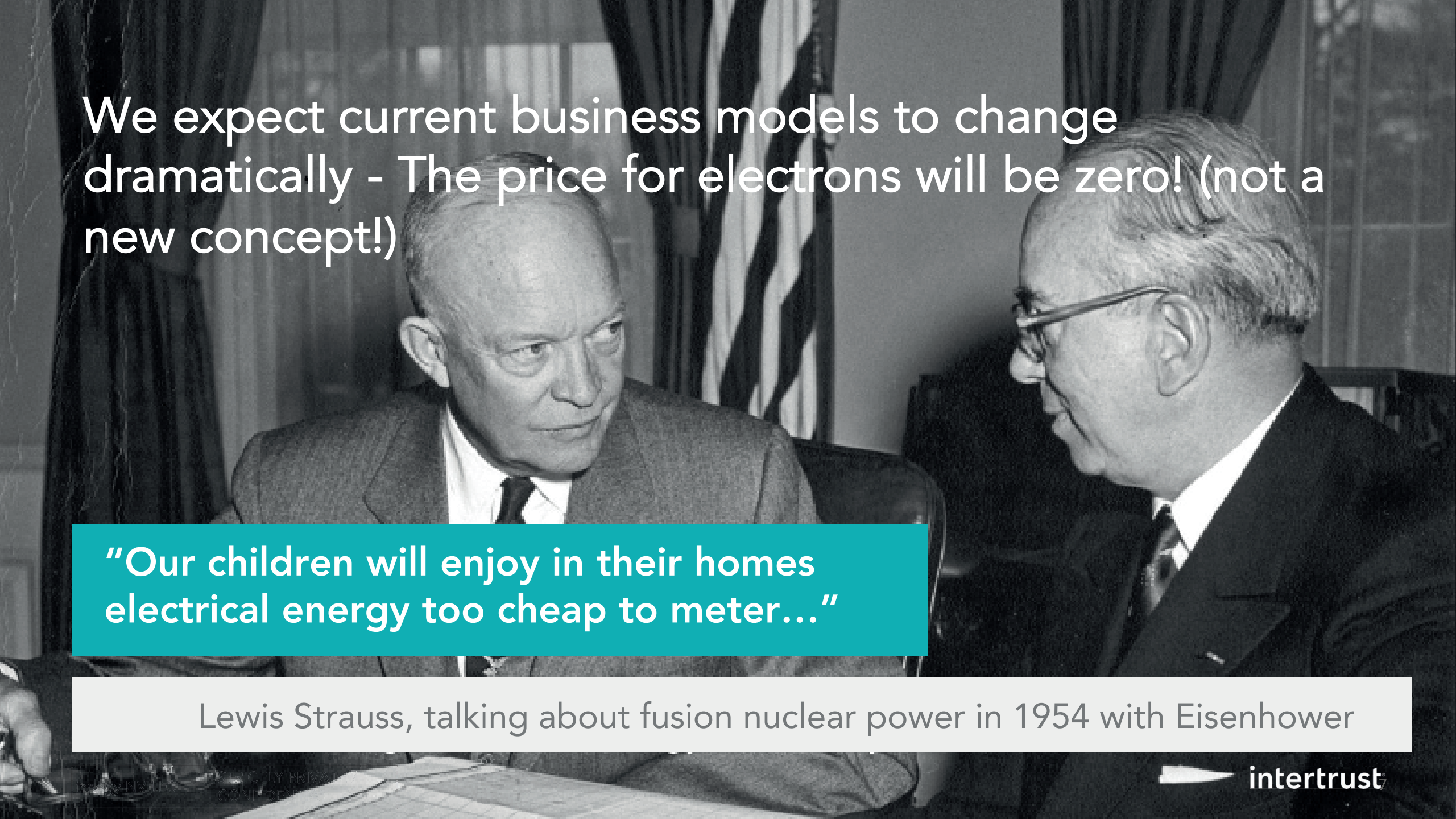

# We expect current business models to change dramatically - The price for electrons will be zero! (not a new concept!)

**"Our children will enjoy in their homes electrical energy too cheap to meter…"**

Lewis Strauss, talking about fusion nuclear power in 1954 with Eisenhower

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CONFIDENTIAL

# Several factors forcing change in the energy market:

- Deregulation
- Distributed Energy Resources
- Climate change concerns
  - Growing demand for clean energy (renewables)
  - Social and political pressures to discontinue traditional power generators

# Digital Utilities

The 1990s gave us ELECTRONIC commerce,
the 2020s will give us ELECTRON commerce

MASSIVE TRANSFORMATION IS UNDERWAY,
SHIFTING ENTIRE VALUE CHAINS

Incumbents are playing defense – attack is the best defense!

Incumbents own and control a wealth of data assets - this can fuel data-driven business models (DDBM)

IoT devices help understand customers better, manage generation, grid and trading in ways never seen before

VPPs, HEMS, P2P trading, EVs, local renewables – the energy system of yesterday will be transformed by embracing the Internet

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# Utilities need to pursue Data-Driven Business Models

## WHAT ARE DATA-DRIVEN BUSINESS MODELS?

1. Business models that deliver products and solutions to customer, which are purely based on digital assets
2. Capture new and novel data, or data that has not been captured before, and build a business around it

## WHY DO WE PURSUE DATA-DRIVEN BUSINESS MODELS?

1. Price and margins from and for electrons are decreasing
2. Utilities own a wealth of data assets across the value chain (generation, grid, retail)
3. Solve utility problems with data and software, extract more value from data

# Our data-driven business model (DDBM) activities have led to new business models for utilities in renewables, grid and retail…

- 2 years ago, we formulated the urgency and potential of DDBM for utilities and received a solid mandate to further develop DDBM
- this has led to a number of new businesses that we support with tech, customers and strategic partners

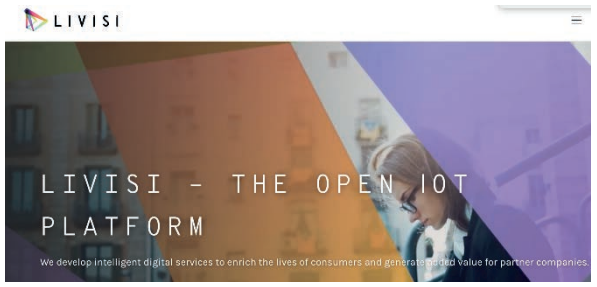
New Business

## DDBM Grid
## Digikoo
## Grid Data Platform

**Grid**

New Business

## DDBM Smart Services
## Livisi Home IoT Platform




**Retail**

New Business

## DDBM Renewables

Wind farm performance and data management

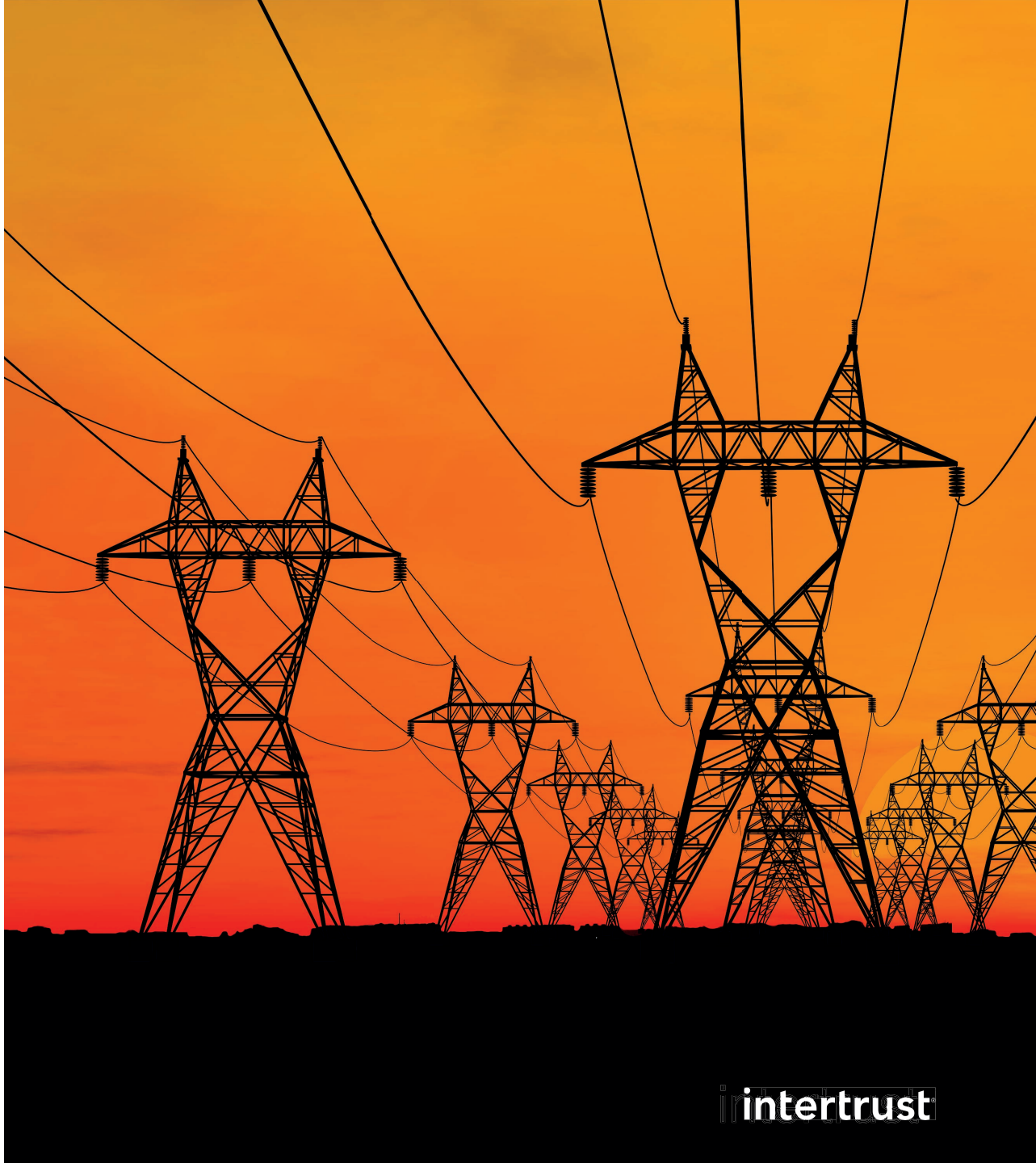
**Renewables**

# Digikoo

**Overview**

Digikoo provides applications to grid operators to help visualize and inspect utility operations. In order to accomplish this, they connect both internal and external data sources and correlate them for user consumption.

Intertrust is working with Digikoo to provide data governance capabilities across a variety of data source, which will then be used to drive bespoke “energy portal” applications that service stakeholders within the utility sector.



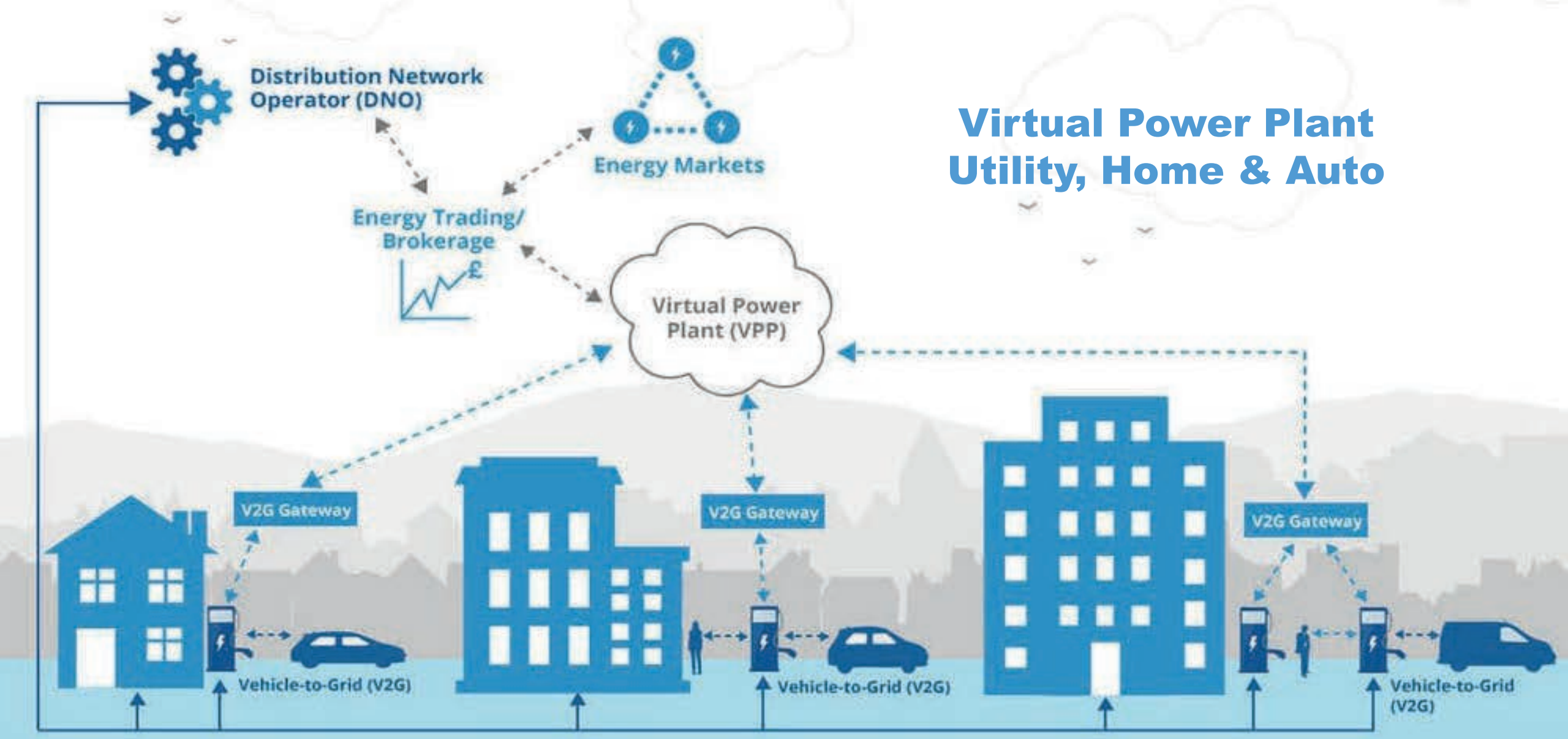
# WIND ENERGY YIELD COVER PRODUCT

**Overview**

A very large insurance company is bringing a new insurance product to market that provides wind farm owners coverage when their generation falls below a set threshold due to covered events. These contracts would be settled automatically on an annual basis using SCADA data from the turbines themselves.

Intertrust is working with the insurance company to provide the technical solution that acquires the necessary turbine data, performs settlement calculations, and communicates outcomes to policy holders.

# Virtual Power Plant
# Utility, Home & Auto




**Data interoperability, trust, and security are critical to success**

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# intertrust®

## Trusted Services for the Connected World

| | |
|---|---|
| Incorporation | Founded in 1990, HQ in Silicon Valley, with offices in North America, Europe, and Asia |
| Shareholders | Sony, Innogy, Origin Energy, WiL, Philips and Panasonic |
| Expertise | Leader in security, privacy, and trust for open networks and service-enabled devices |
| Inventions | Trusted Distributed Computing, Digital Rights Management, Secure Interoperability |
| Markets | Media, Consumer Electronics, Energy, IoT, Automotive, Healthcare, and more |

# Intertrust Products

## DATA RIGHTS MANAGEMENT PLATFORMS

### Modulus™

**Trusted Data Rights Management Platform**

Modulus is a secure interoperability data platform designed for organizations with sensitive, high volume data assets. The platform provides a powerful big data engine to integrate, process, store, and index large-scale disparate data. Its modular and extensible architecture provides support for a wide variety of data types, formats, and protocols.

### Planet OS™

**Geospatial Big Data Platform**

Planet OS provides big data infrastructure to help renewable energy companies transform the way data is used in their organizations. From operators in control rooms to executives in boardrooms, our specialized applications to integrate, exchange, and visualize data for all stakeholders make renewable energy more competitive.

## SECURE SYSTEMS

### whiteCryption™

**Application Shielding**

Many modern apps carry secrets and personal information that must be protected from hackers. whiteCryption provides Cryptanium security software tools for app developers to protect software code integrity from being compromised, and a secure white-box cryptography library that protects cryptographic keys embedded within app code. whiteCryption is a subsidiary of Intertrust and a pioneer in advanced mathematical techniques for protecting software from attackers.

### Seacert™

**Certificate Authority**

Seacert provides trusted digital certificates that authenticate the identity of devices and services. Seacert also provides trusted root keys for Internet-based systems such as app stores and media distribution platforms. Seacert has shipped over a billion certificates to Internet-connected devices around the world, and is expanding into new markets such as smart grids and IoT devices.

## MEDIA SOLUTIONS

### ExpressPlay™

**DRM System**

ExpressPlay is a secure, complete, cloud-based Digital Rights Management (DRM) system that meets even the toughest Hollywood standards. ExpressPlay is the only multi-DRM technology available across all popular platforms and formats. It allows content distributors of all sizes to distribute video, audio, ebooks, easily, flexibly, and cost-effectively.

### Kiora™

**Offline Content Delivery System**

Kiora provides a secure distribution platform for content providers to publish and deliver content to domains where internet bandwidth is inaccessible or sometimes unavailable. Our patented platform comes with a ready-to-deploy content appliance along with a publishing backend. We pioneered the micro-cloud architecture for distributing content where the user does not have to pay for expensive bandwidth.

# Shipping Modulus

## Trusted Data Rights Management Platform To Enable Data Driven Business Models

# Modulus

## Three critical capabilities combined into one trusted data platform

### Data Virtualisation

Eliminate the need to duplicate data across an organization or consolidate data into a single warehouse. Data Virtualization allows you to securely govern, process, and exchange data across data stores and work with diverse data types and formats.

### Data Governance

Enforce all requests for data to go through the rights and permissions set by the data owner. By enabling granular control down to a dataset row, column, or a single cell, access to data is either granted (or denied) to specific accounts, groups, or organization.

### Secure Data Services (SDS)

An isolated environment for the deployment of data-driven services and computational workloads that operate on governed data. Using SDS enables data owners and service or analytics providers to work together without exposing intellectual property.

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# Thank You

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