



*Enhance your profitability*

## O&M for PV Series: State-of-the-art monitoring, automation and data analytics

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by isotrol

# Global Technology provider

Main references worldwide, more than 35 countries



34 years experience.  
20 years Renewable



+ 250 people  
80% M. Sc



**+ 25 Gigawatts**



35 Countries  
1.523 Plants  
778 SCADAS  
24 Control Centers  
16,2 Back up GW



## Main clients


# Bluence

*enhance your profitability*

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# Background

Past

## Business Evolution

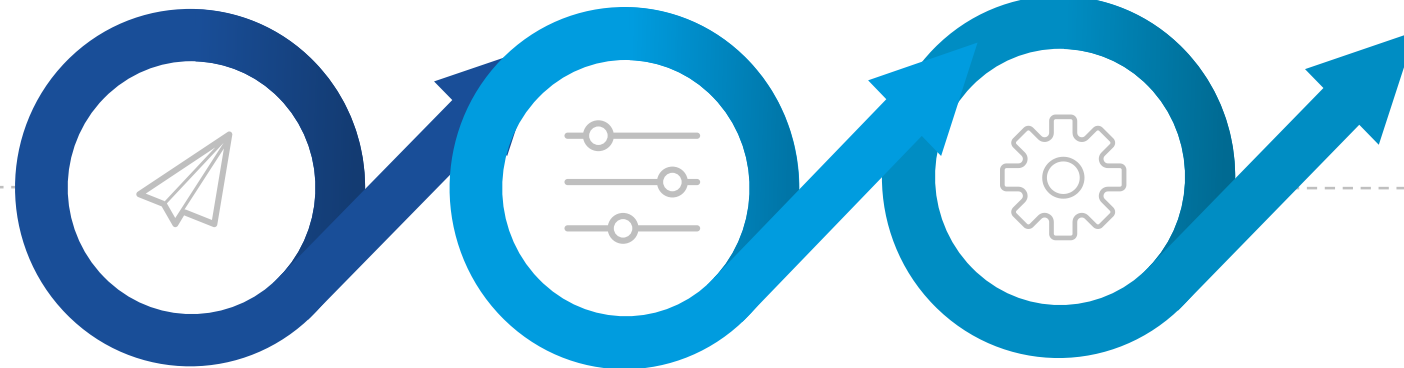
Grants for renewable penetration

## New metrics

Goal: Contractual KPI,  
availability

## Service & Tools

Low digitalization. Monitoring tool satisfy  
Business needs



Nowadays

Renewable participate at  
electricity wholesale  
market & regulation

Operational efficiency:

- Maximize production
- Minimize O&M cost
- Maximize wholesale incomes

New solution to satisfy business needs.

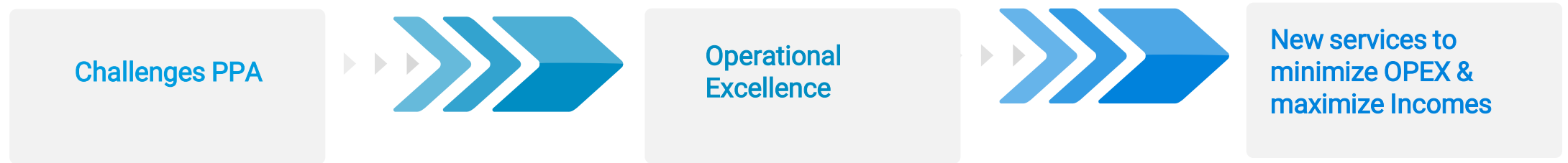
**Services** to reach **Operational efficiency** at  
renewable assets.

## Business Evolution

## New Metrics

## Service & Tools

# Problems to solve



01

## Renewable Assets

Thousands of wind turbines, inverters, string boxes with millions of signals every few seconds

02

## SCADAs Systems

Local Scada without intelligence to detect and quantify early performance deviation

03

## Control Centers

Overview runtime portfolio KPI and assets details. Pending the task prioritization based on advance analytics.

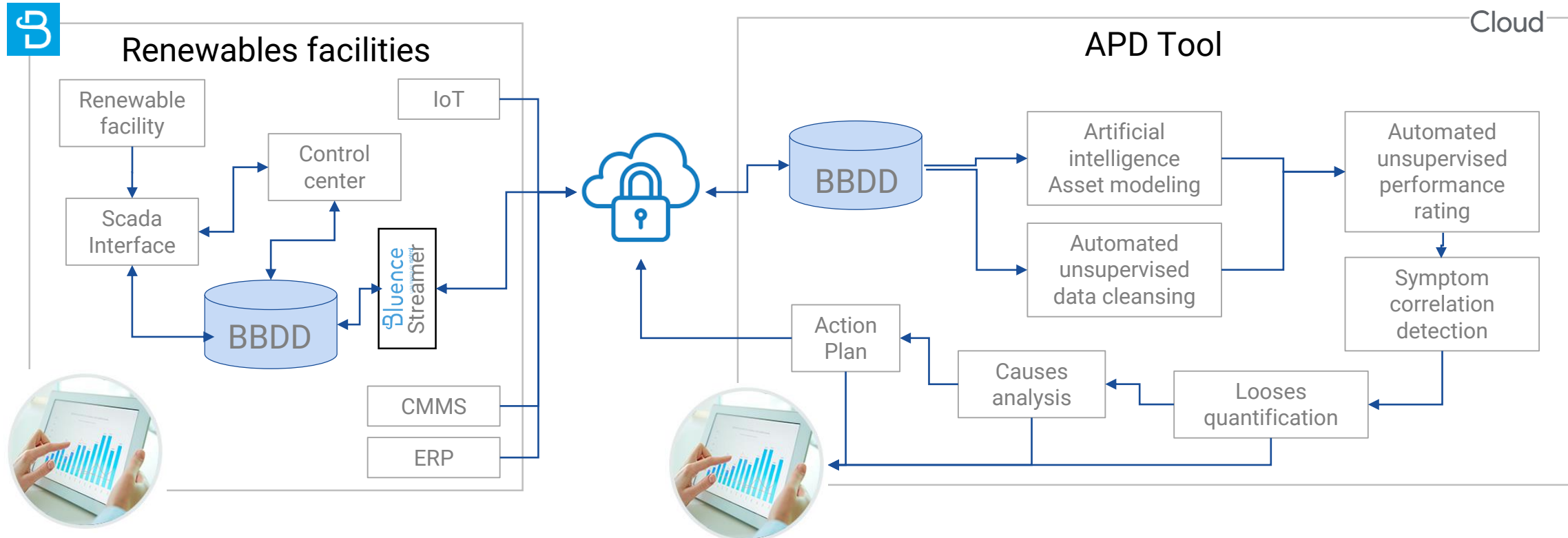
04

## Advance Service

Detect early deviation asset performance and take action for operational excellence

# Value proposal

**Asset Performance Diagnosis is Service** for operational excellence of large renewable portfolios that automatically detect, quantify and contextualize main cause of non-optimal production of **renewable energy asset portfolio**.

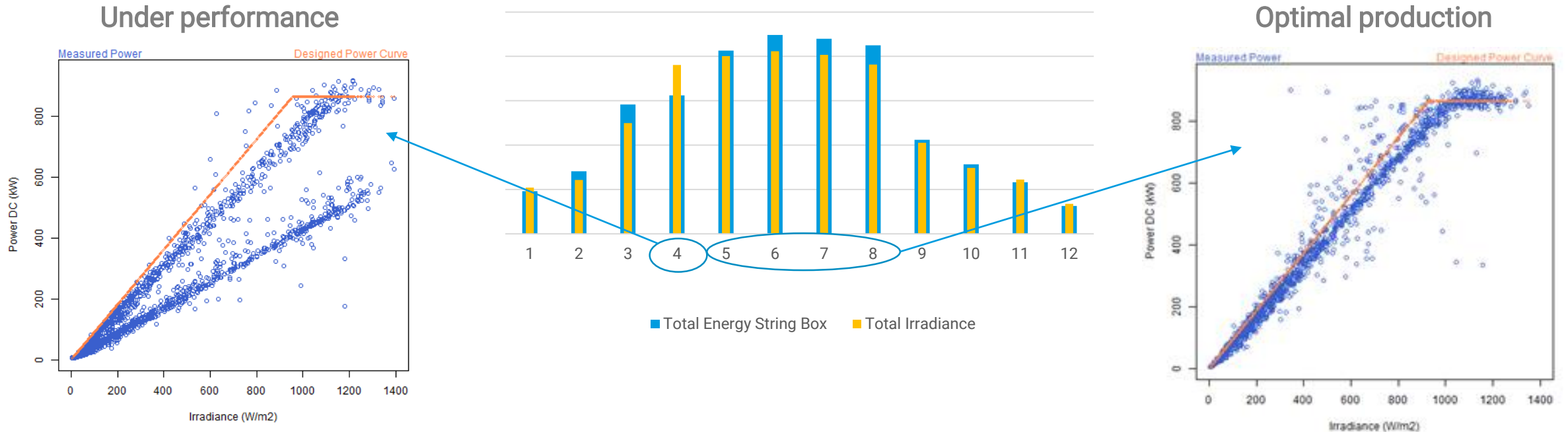




# Case Study

APD detect under performance, identify cause and propose action for operational excellence

## Resource Vs Production



**Bluence Performance Diagnosis Service**  
The action increase 4% incomes

# Case Study

## BLUENCE PERFORMANCE DIGANOSIS SERVICE BENEFITS

Re-scheduling Maintenance labor increase 4% income

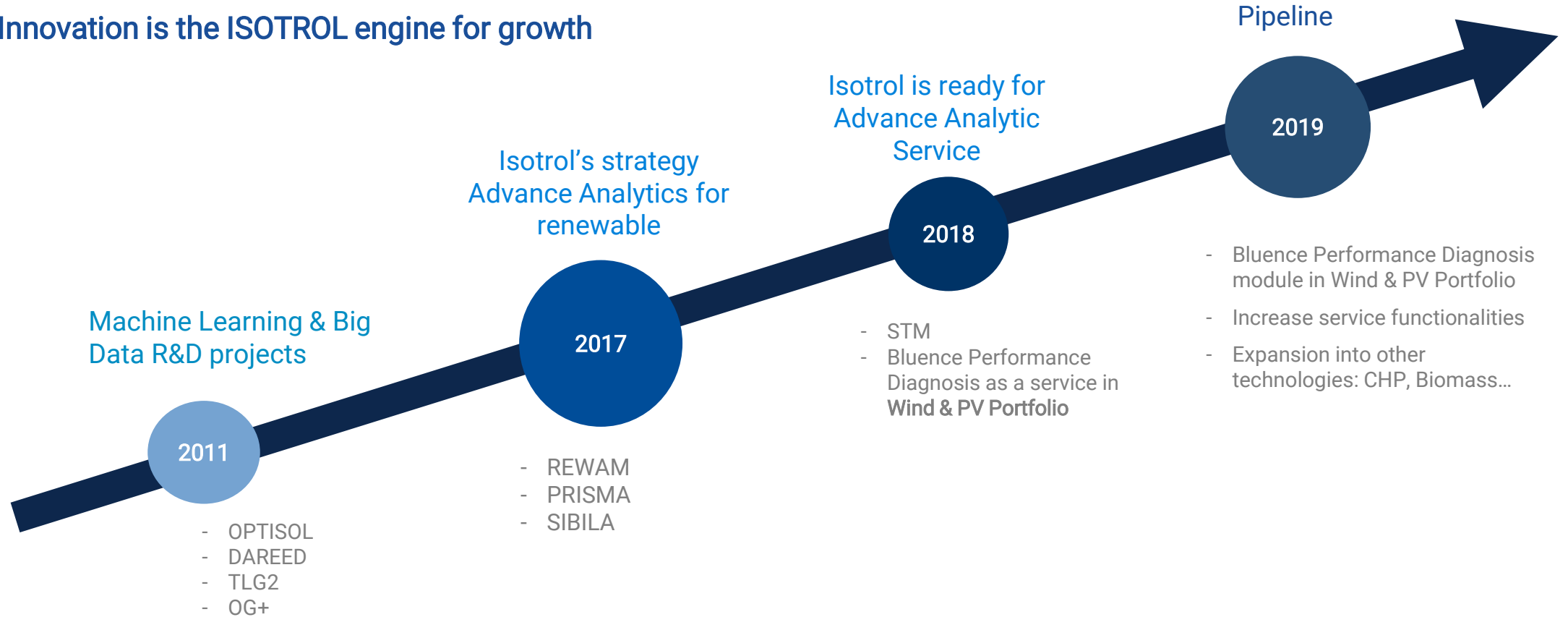
	Production (GWh)	Total Incomes	Increase Revenues	% Increase Operational excellence
Before	16,1	€ 1.870.146	-	-
Thanks to Bluence Service	16,2	€ 1.940.485	€ 70.339	4%



# Isotrol's Timeline

From our past projects to 2019 pipeline

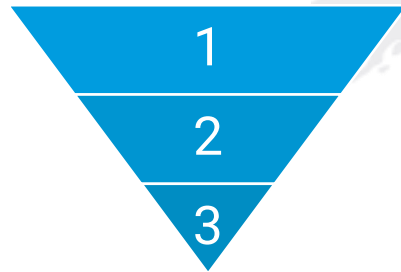
Innovation is the ISOTROL engine for growth



# Conclusion

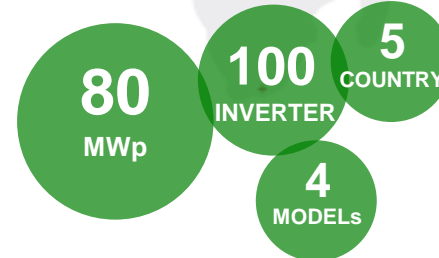
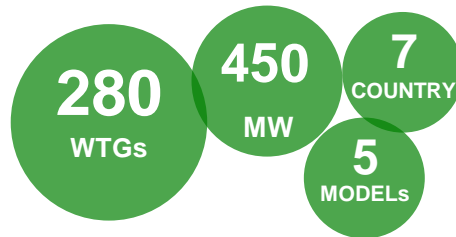
Bluence Performance Diagnosis Service for operational excellence.

The Bluence Performance Diagnosis Services include:



1. Early detection & contextualization: subsystems degradation or malfunction
2. Performance Loss quantification
3. Action Plan

Bluence Performance Diagnosis References:





# Estefania de Osma

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WEBINAR

**State-of-the-art  
monitoring,  
automation and  
data analytics.**

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