



*Enhance your profitability*

## Lowering OPEX costs for PV projects

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by isotrol

# Your technological partner

Highlighted references in more than 35 countries



34 years of experience  
20 years in Renewables



+ 250 professionals  
80% M. Sc



**+ 25 Gigawatts**



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



## 7 Offices

- Main Headquarter
- Office
- Project

## Some of our main customers


# Bluence

*enhance your profitability*

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# Background

**Before**

## Business Evolution

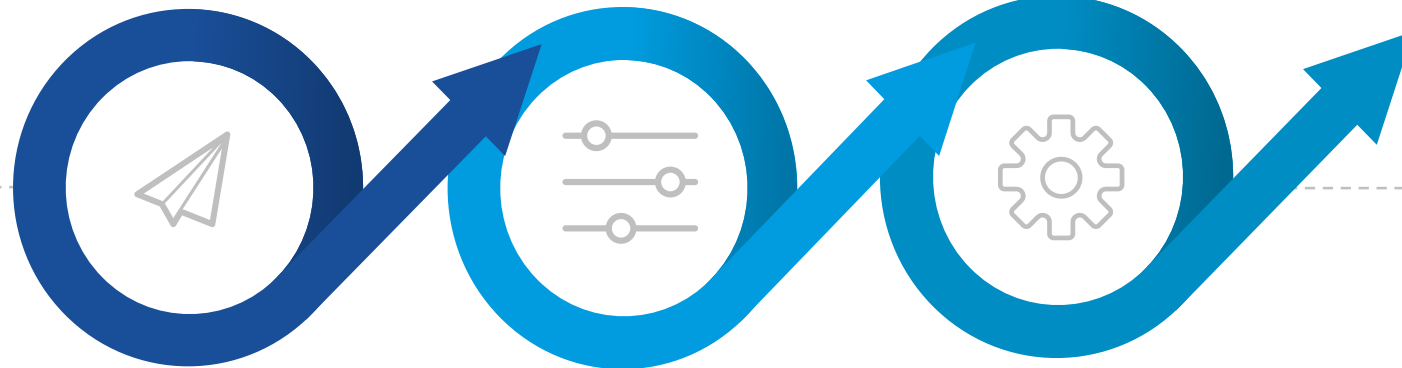
Renewable bonuses and generation preference.

## New metrics

Main objective: meet contractual availability

## Tools

Monitoring tools do not count with the necessary functionalities and the CMMS are no adapted to the business.



**Nowadays**

Participation in the electricity wholesale market and regulation

Energy availability: produce the maximum at the best available price and resource

New tools are required to help manage maintenance quickly and based on these new metrics.

## Business Evolution

## New metrics

## Tools

# Problems to solve



01

## Control System

Local control systems without tools for maintenance management or with incomplete functionalities

02

## CMMS

Use of CMMS that are not adapted to the business, very difficult to implement and complex to use.

03

## Forecasting

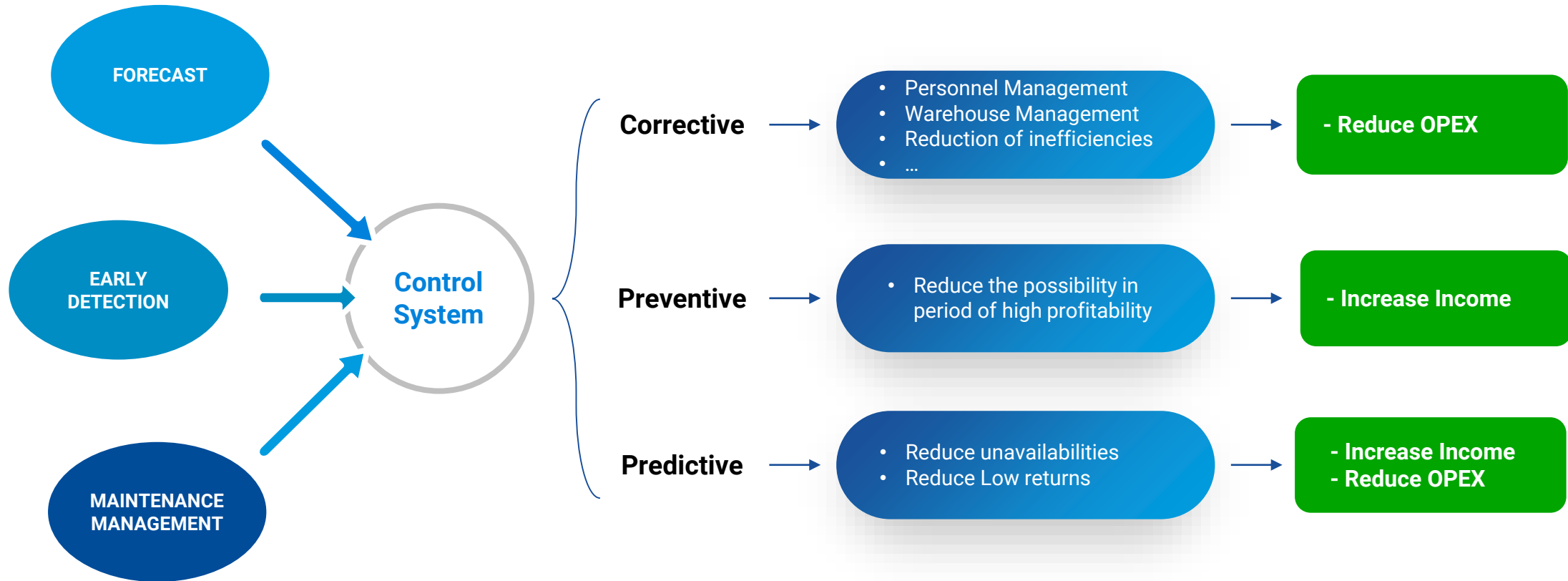
The resource forecast is not used for an automated maintenance planning.

04

## Early Detection

The failure predictive is still in development and does not connect with maintenance management tools to propose actions.

# Value Proposal



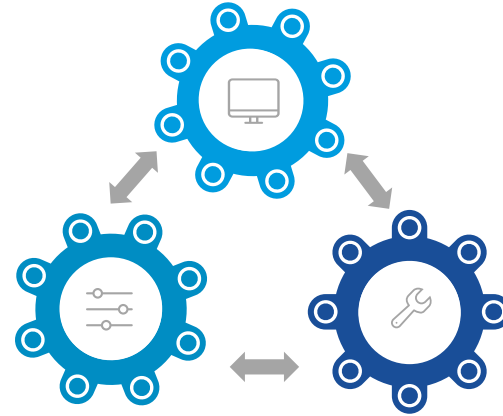
# Case Studies

Portfolio	Solution	Improvements	
<ul style="list-style-type: none"> <li>○ 1 GW</li> <li>○ 7 countries</li> <li>○ 17 plants</li> </ul>	<ul style="list-style-type: none"> <li>✓ Control System with integrated Maintenance Manager (Go&amp;M)</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of inefficiencies and downtime</li> <li>• Displacement Reduction</li> <li>• Minimize gathering timings</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce operational costs</li> <li>• Reduce downtimes</li> <li>• Reduce penalties</li> </ul>
<ul style="list-style-type: none"> <li>○ 0,8 GW</li> <li>○ 5 countries</li> <li>○ 40 plants</li> </ul>	<ul style="list-style-type: none"> <li>✓ Control system with APD service (Asset Performance Diagnosis)</li> </ul>	<ul style="list-style-type: none"> <li>• Act before unavailability</li> <li>• Reduce inefficiencies</li> </ul>	<ul style="list-style-type: none"> <li>• Increase income</li> <li>• Reduce unavailability</li> </ul>
<ul style="list-style-type: none"> <li>○ 0,9 GW</li> <li>○ 6 countries</li> <li>○ 45 plants</li> </ul>	<ul style="list-style-type: none"> <li>✓ GO&amp;M</li> <li>✓ Forecast resource</li> </ul>	<ul style="list-style-type: none"> <li>• Optimize the maintenance planning</li> <li>• Plan unavailabilities when the resource is minor</li> </ul>	



# Conclusion

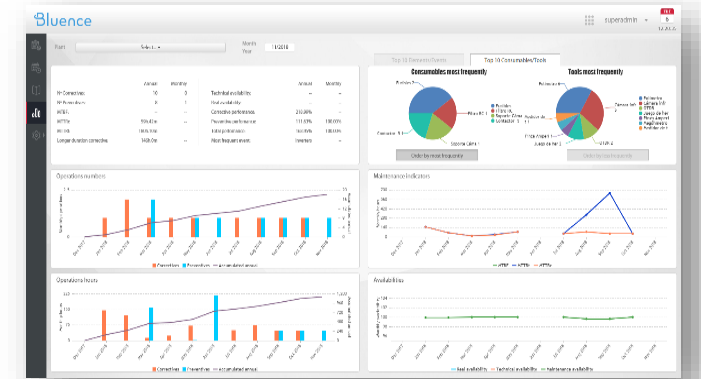
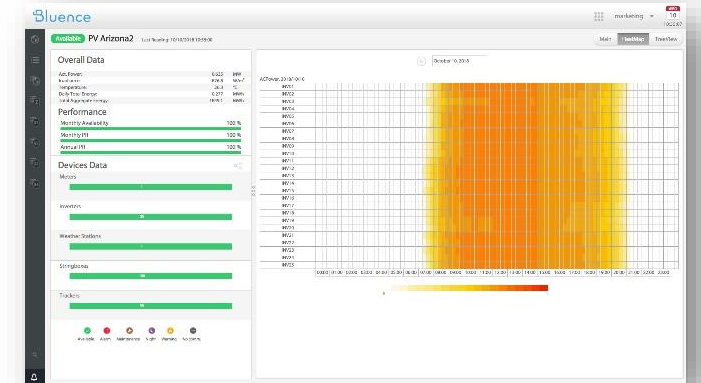
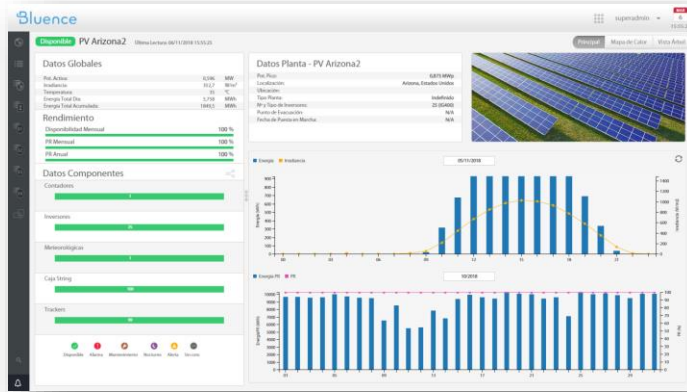
## Operation & Monitoring



## Production and Failure Prediction

## Maintenance Processes

# Global System





# Conclusion

## Reduce OPEX

- Optimal maintenance management
- Automated processes and activities

## Process Integration

- Optimize and automate maintenance
- Increase in revenue



PROFITABILITY



**Ignacio Roman**   
*Product Manager*

**WEBINAR**

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