



 INNOVATION AND  
TECHNOLOGY



TODAY'S SMART COMPANIES DON'T SELL PRODUCTS;  
THEY SELL BENEFIT PACKAGES. THEY DON'T SELL  
PURCHASE VALUE ONLY THEY SELL USE VALUE

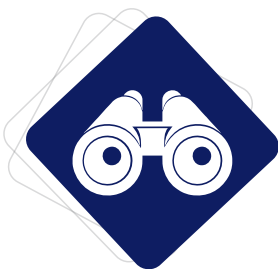
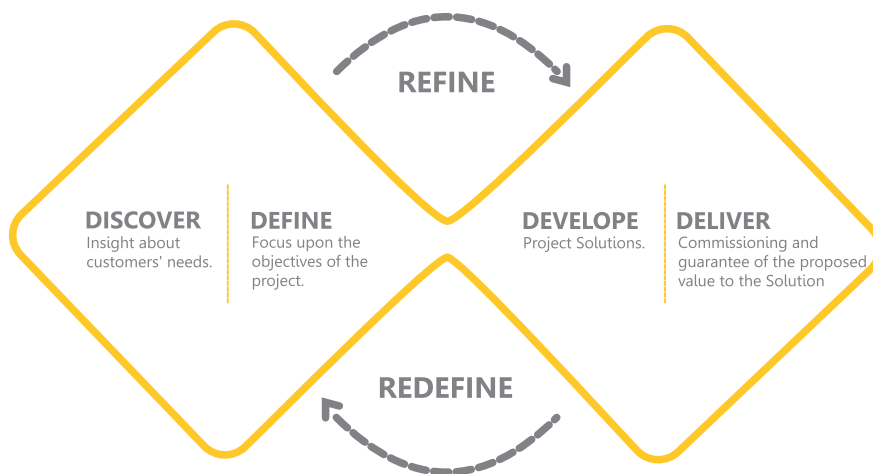
KOTLER, P.

## INNOVATION AND TECHNOLOGY THAT BRING REAL BENEFITS TO THE CUSTOMERS

Founded in 2014, Yellow Solutions brought to the Brazilian market technology innovation that allow and bring real value and benefits to the customers. Innovation and Technology with return of investment. For such thing, it was necessary an immersion on what we call Optimization and Process Improvements.

The Optimization and Process Improvements are not fulfilled by the supplying of products, but the supplying of Solutions.

Such solutions demand a complex integration and expertise, which are well represented on the Double Diamond Diagram.



### DISCOVER

Represents the first phase where the needs are identified.



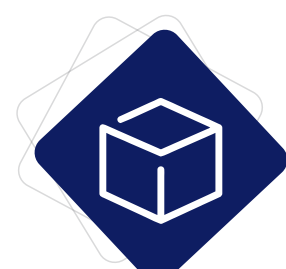
### DEFINE

Multidisciplinary team, composed by the customer, Technology supplier and engineering; define the problems/ challenges to be overcome.



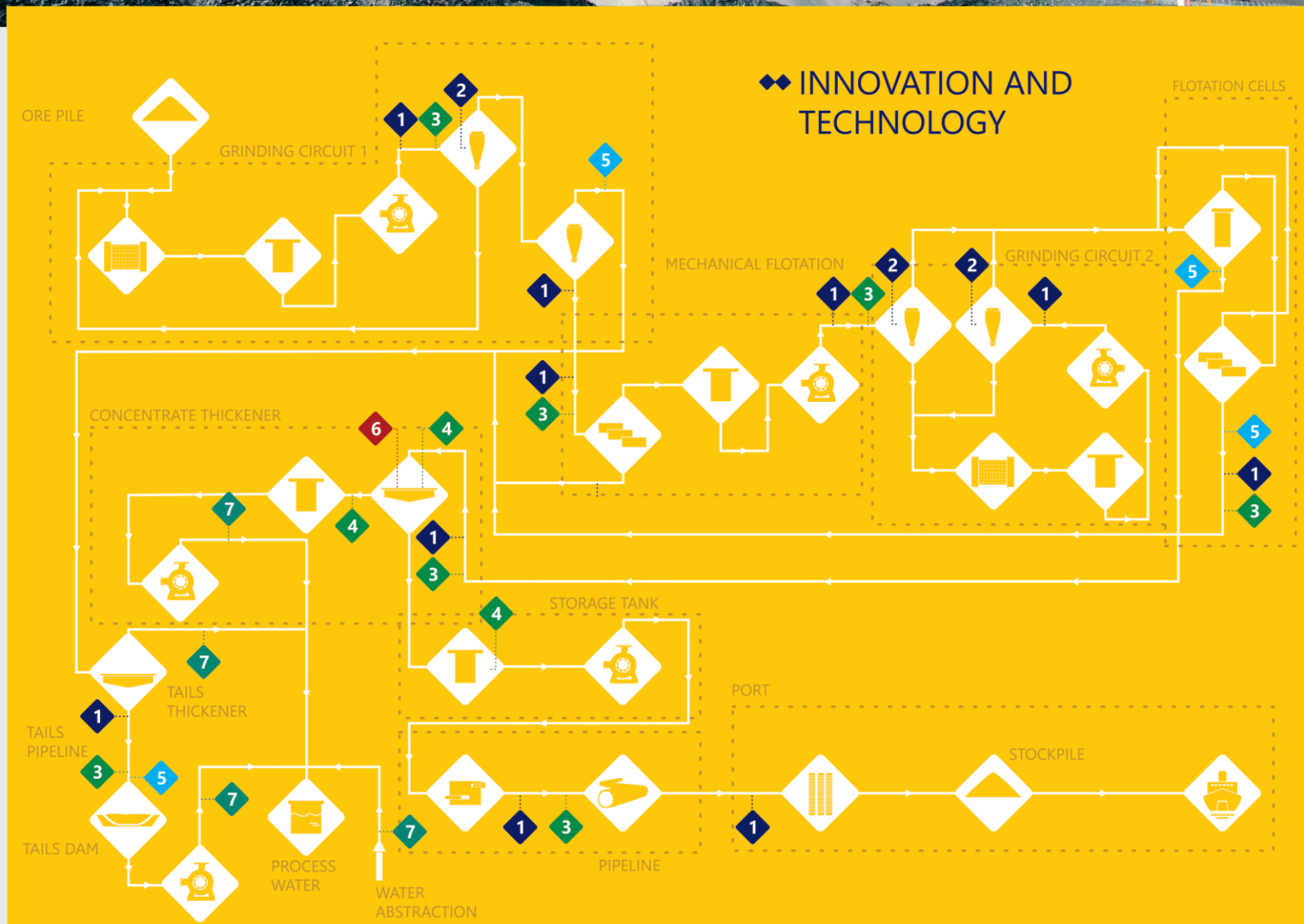
### DEVELOP

Solutions that can be implemented and approved by the financial and technical view.



### DELIVER

Installation, Commissioning and Value proof. Demonstrates the expected results.



- 1 SONARtrac**  
Non-Intrusive flowmeter for slurries.
- 2 PST**  
Online Particle Size Analyser, individual per cyclone.
- 3 SDM**  
Non-Radioactive Density meter, inline, for slurries.

- 4 SRH**  
Density, TSS and TDS gauge to be used in tanks of slurry.
- 5 MQi**  
Chemical Content, inline, Online Analyser for slurry.
- 6 Smart Diver**  
Level and Interface Analyser for thickeners.

### **SONARtrac** - Non-Intrusive flowmeter for slurries

SONARtrac employ patented sonar array processing techniques. By installing non-intrusively on existing process lines, the SONARtrac clamp-on system allows on-line real-time measurement of the volumetric flow and amount of entrained air/gas present in any liquid continuous-phase process fluid. This flowmeter is used on the main points of the process to allow an accurate control and mass balance. It has been currently in use on the main pipelines in Mining industries in Brazil.

### **PST** - Online Particle Size Analyser, individual per cyclone

The CYCLONetrac Particle Size Tracking (PST) system is a novel system that provides real-time feedback of grind circuit and individual hydrocyclone performance. The technology's value lies in its ability to track the particle size of the entire overflow stream from a hydrocyclone battery based on the contribution from each individual hydrocyclone. This enables real-time closed-circuit grind control strategies targeting improved mineral recovery, increased grind efficiency, while maintaining or increasing plant throughput.

### **SDM** - Non-Radioactive Density meter, inline, for slurries

The Slurry Density Meter SDM is density Analyser based on ultrasonic technology, developed and manufactured by Rhosonics. This instrument is used to measure density and concentration in fluids with low and high percentage of solids (slurry). By measuring the acoustic impedance, the SDM calculates the density of the slurry in-line. The sensor is made of stainless steel and its wet-part is made in ceramics. The SDM replaces old technologies such as the ones based on radioactive sources, showing the same performance but avoiding risks of serious accidents caused by radiation.

### **SRH** - Density, TSS and TDS probe to be used in tanks of Slurry

The SRH is Density Analyser based on ultrasonic technology, developed and manufactured by Rhosonics to be used on slurry tanks.

### **SRC** - Concentration Analyser

The SRC is a Concentration Analyser based on ultrasonic technology, developed and manufactured by Rhosonics, to be used on clean fluids (e.g. acids). Can be installed in-line, no need for a by-pass, or tanks.

### **Smart Diver** - Level and Interface Analyser for thickeners

SmartDiver is an Analyser developed and manufactured by Precision Light and Air | Process Analysers. This instrument is a ruggedised mud diver that provides measurement of mud levels, settling zones and overflow clarity in thickeners, clarifiers, washers and decanters. Tank profiling (suspended solids vs depth) is also provided, as it is specific gravity profiling and bed level measurement. The percentage of solids on clarity zone and of the slurry on the feedwell can also be measured considering the use of additional probes.

### **MQi** - Online, Inline, Analyser of Chemical Content on slurry

Blue Cube Online Analyser provides Inline Real Time measuring of chemical content and mineralogy (Silica, Au, Sulphites, Sulphides, Li, Fe, Ni, Cu, Mn, Cr, Mo, Al, Nb, V, Ti, Zn, Co, etc). Non-Radioactive technology, which is based on optical spectroscopy correlated with chemometric to elaborate mathematical models. It is installed directly in the process line, it means that the Analyser do not require any special sampler structure on changes in the line to deviate the flow.

## **WE LIVE BY INNOVATION!**

Yellow Solutions is a technology company. The productivity is a global imperative and only by embracing innovative partnerships the mining industry will reach its goals and grow.

**Yellow Solutions, strategic solutions for your process.**





Office: +55 019 **3461 0525**

[vendas@yellowsolutions.com.br](mailto:vendas@yellowsolutions.com.br) | [www.yellowsolutions.com.br](http://www.yellowsolutions.com.br)

Rua das Castanheiras, 156 | Jd. São Paulo | Americana | São Paulo | Brazil

