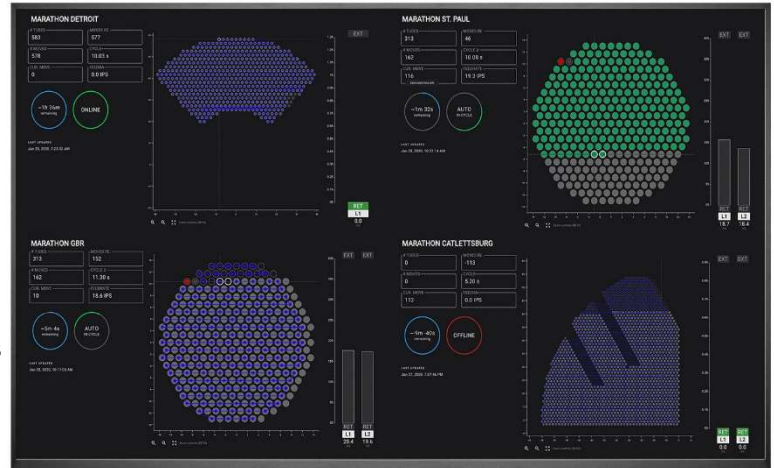


# Computerized Tube System (CTS)

## Benefits of CTS

- **Safety**
  - Eliminate the slicker suit
  - Remove employee out of line of fire using Vision System to see up to 100' from tube sheet
- **Speed / Accuracy**
  - Automatic indexing tube to tube based on client information and programming "98% energized" pressure tube to tube
- **Data**
  - Ability to track live jobs straight to customers phone/computer
  - Ability to create library of exchangers and recipes for sites using CTS



**Safety**

We have to get the employees out of a slicker suit and away from all pressurized hoses, confined space and IDLH atmospheres

Reducing crew size by up to 50% minimizes exposure risks



**Labor Market**

It's getting harder to find people that care and want to work in the field at a quality level

We are creating a system where we can use fewer but higher paid individuals and add more value to our company and customers



**Recipe**

Take the person out of the equation

Have our support groups help lay out the recipe and let our field crews run the job

Be able to repeat a performance no matter who is on the crew

Stores all cleaning data for review and improvement opportunities



**Maximizing resources**

Use the correct pump  
Lances, tips, feed rates  
Minimize the amount of people

Scheduling of relief / other trades

Use less water and fuel  
Decrease CO2 emissions

Increase uptime on critical path processes

