

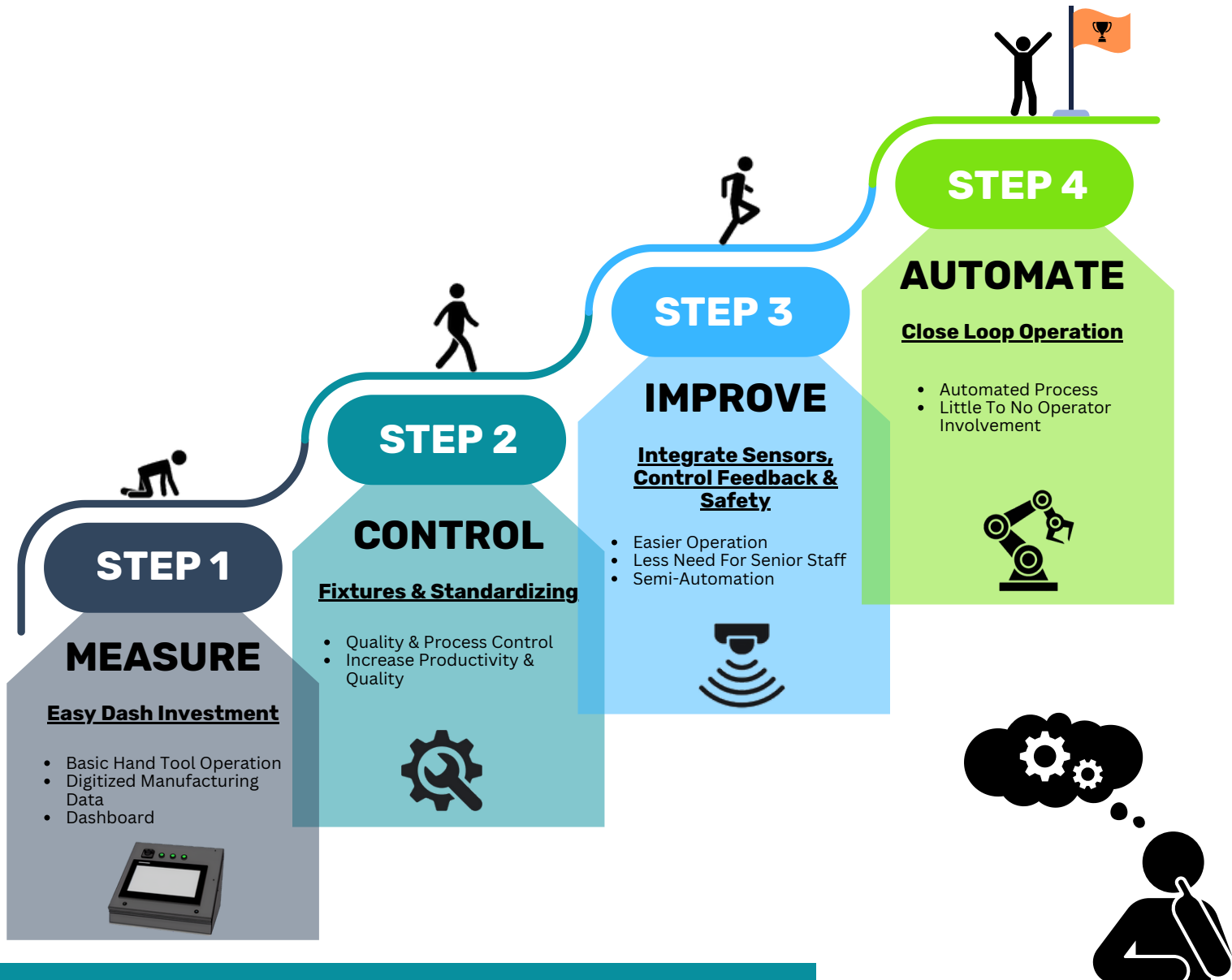
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# PATH TO AUTOMATION

YOUR PATH TO ATTAINABLE AND COST-EFFECTIVE AUTOMATION

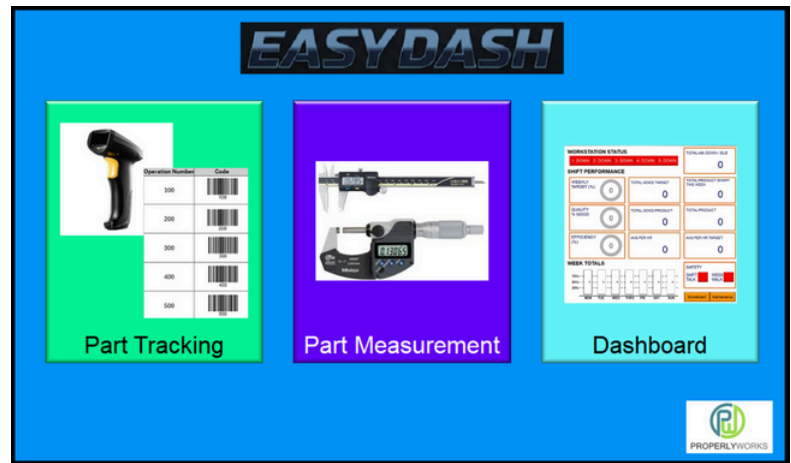
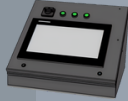


## STEP 1

### MEASURE

#### Easy Dash Investment

- Basic Hand Tool Operation
- Digitized Manufacturing Data
- Dashboard



Measurement can be done manually using tools like calipers, micrometers, stopwatches, or handwritten tally sheets. While this approach can provide some insight into a process, it often introduces inconsistencies and human error. Measurements may vary between operators, readings can be mis-recorded, and observations can be missed entirely during busy production periods. Subjectivity and interpretation, especially when relying on visual assessments, can lead to flawed data that obscures the true state of operations. Manual tracking also slows down the feedback loop, making it harder to spot trends or intervene early when something is off.

Using the Easy Dash platform to capture data addresses these issues directly by integrating digital tools that feed accurate, real-time information into a centralized system. Digital micrometers and calipers, for example, can transmit precise measurements directly to Easy Dash without manual input. Vision systems can automatically detect part orientation, defects, or dimensions, while laser measurement tools can track positional or profile data down to fractions of a millimeter. These digital sources eliminate subjectivity, reduce operator burden, and vastly increase the speed and volume of data collection. With Easy Dash, this data is instantly visualized and contextualized, enabling teams to make faster, more confident decisions based on trusted information.

## Step 1: Measure

### Easy Dash Investment

**Basic Hand Tool Operation:** Introduce fundamental measuring tools and techniques to ensure accurate data collection.

**Digitized Manufacturing Data:** Transition from manual data recording to digital formats, reducing errors and increasing accessibility.

**Dashboard:** Utilize a centralized dashboard for real-time data visualization, enabling better decision-making and process tracking.

# MEASURE



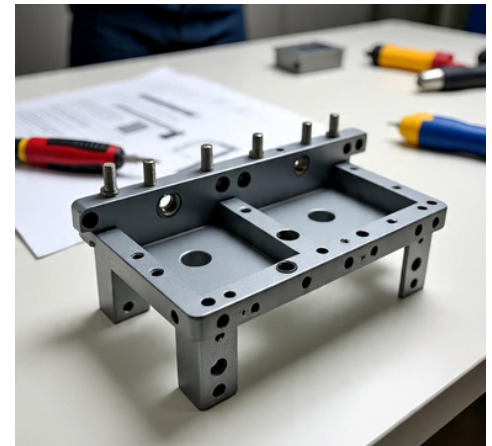
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## STEP 2

### CONTROL

#### Fixtures & Standardizing

- Quality & Process Control
- Increase Productivity & Quality



Without proper fixturing and standardized step-by-step processes, even the most skilled operators can struggle to maintain consistency. Variability creeps in when parts are misaligned, tools are positioned differently, or sequences are performed out of order. This lack of control leads to inconsistent quality, rework, and wasted time. Operators may interpret instructions differently or forget a critical step, especially in high-mix or low-volume environments. Over time, this variability compounds, making it difficult to trace the root cause of defects and slowing efforts to improve the process.

By introducing well-designed fixtures and pairing them with clear, accessible work instructions, manufacturers can dramatically increase repeatability and throughput. Fixtures hold parts in place reliably, ensuring consistent orientation and alignment, while digital work instructions guide operators through each step with visuals, checks, and prompts. Easy Dash plays a pivotal role in this control phase by enabling interactive, digital work instructions that adapt to real-time inputs and track progress. When integrated with standard fixtures, Easy Dash can help create “smart fixtures” that confirm part presence, validate tool position, or signal the next step in the sequence. This combination reduces cognitive load on operators, ensures processes are followed precisely, and creates a stable foundation for further improvement and automation.

## Step 2: Control

### Fixtures and Standardizing

**Quality and Process Control:** Implement standardized fixtures to improve consistency and reduce variability in manufacturing processes.

**Increase Productivity and Quality:** Ensure repeatability and reliability, leading to higher efficiency and reduced defects.

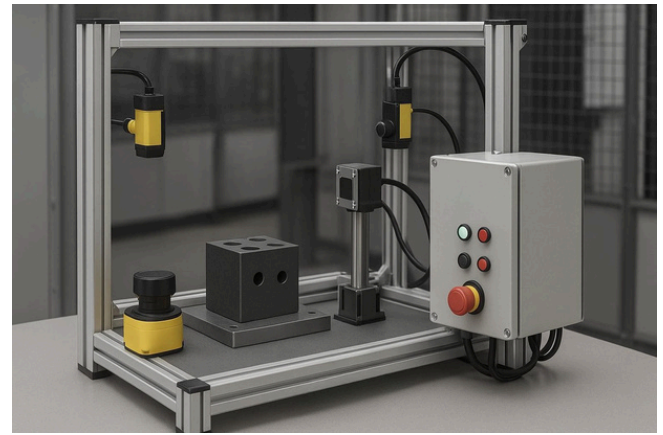


## STEP 3

### IMPROVE

#### Integrate Sensors, Control Feedback & Safety

- Easier Operation
- Less Need For Senior Staff
- Semi-Automation



In many manufacturing environments, parts are assembled and tested using only operator judgment and mechanical processes, without the aid of sensors or integrated control systems. While this can work in simple or low-volume scenarios, it often places a heavy burden on the operator to detect issues, verify part presence, and ensure correct assembly. This manual reliance increases the chance for mistakes—missed steps, misaligned components, or unnoticed defects—that can result in quality problems or downstream failures. It also slows down production, as operators must pause to verify conditions that could otherwise be confirmed automatically. Without feedback loops, errors are only discovered after the fact, making improvement reactive instead of proactive.

By introducing sensors, control logic, and feedback mechanisms into the process, manufacturers can create smarter workstations that support the operator and prepare for future automation. Sensors can verify part orientation, detect missing components, or confirm critical measurements, while safety devices and interlocks ensure the process is only executed under the right conditions. These systems not only help catch issues early but also provide a foundation for repeatable, data-driven improvements. Easy Dash enhances this by capturing feedback from these sensors and controls in real time, displaying alerts or instructions to the operator and storing historical data for analysis. This integration bridges the gap between manual and automated systems, ensuring that each improvement step aligns with the ultimate goal of a fully automated, optimized process.

## Step 3: Improve

### Integrate Sensors, Control Feedback and Safety

**Easier Operation:** Enhance usability through smart feedback mechanisms, reducing operator workload.

**Less Need for Senior Staff:** Automate key decision points, allowing less experienced operators to achieve high-quality results.

**Semi-Automation:** Introduce automated steps while maintaining human oversight, setting the stage for full automation.

# IMPROVE



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## STEP 4

### AUTOMATE

#### Close Loop Operation

- Automated Process
- Little To No Operator Involvement



The benefits of full automation are well known: increased throughput, consistent quality, reduced labor costs, and the ability to run operations with minimal downtime or error. Automated systems perform repetitive tasks with unmatched precision, operate continuously, and adapt quickly to changing demands when designed with flexibility in mind. By removing human variability, automation also improves safety, minimizes waste, and generates detailed performance data that can be used to fine-tune production in real time. For manufacturers facing labor shortages, quality challenges, or aggressive growth goals, automation is a powerful and often necessary step forward.

What makes the transition to automation truly successful is building a solid foundation from the beginning—and that's where Easy Dash plays a critical role. Because it's involved from the first step of measuring and controlling through process improvements, Easy Dash becomes the digital thread connecting each phase. It collects and structures data from manual inputs, smart fixtures, sensors, and operator interactions, all of which can be carried forward into automated systems without starting from scratch. When a process that used to rely on digital calipers or vision checks is upgraded to a robotic cell, Easy Dash already knows the workflow, tolerances, and logic, enabling a seamless transition. This continuity reduces integration time, simplifies

troubleshooting, and ensures that automation is not a disruptive overhaul, but a natural evolution of an already optimized process.

## Step 4: Automate

### Closed-Loop Operation

**Automated Process:** Implement a fully automated workflow, minimizing manual intervention.

**Little to No Operator Involvement:** Achieve self-regulating systems that optimize efficiency and precision with minimal human input.

# AUTOMATE



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