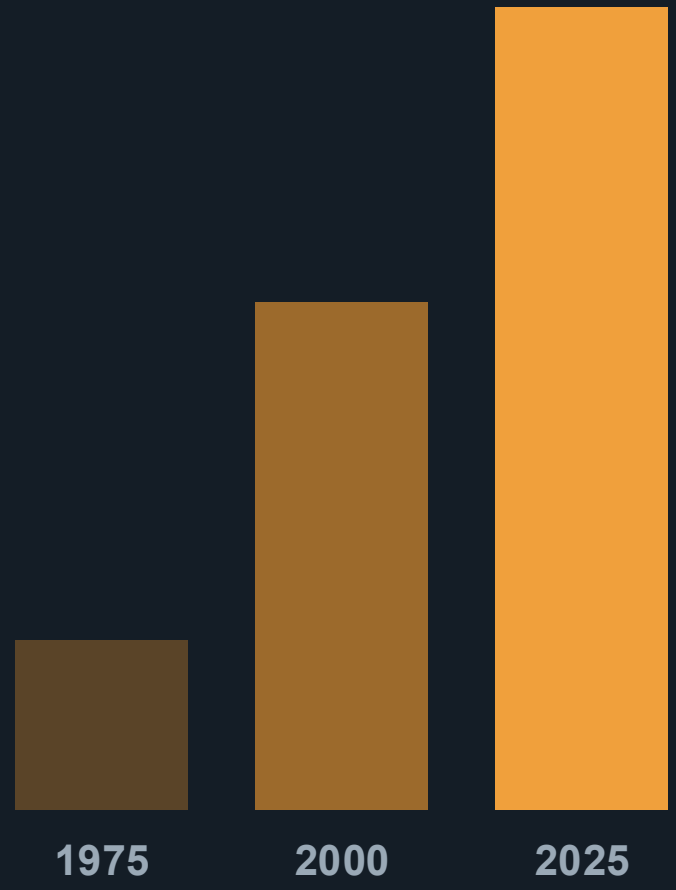
Automate or Die

The human side of the path to automation

As plants moved from gearboxes and relays to networked, connected automation, the skills needed to support them changed just as fast. Starting out or modernizing, automation is also a people plan.



“Automate or die” doesn’t mean buy robots fast

Buy equipment once

A one-time purchase any competitor can match.

Build capability permanently

The advantage isn’t owning robots. It’s knowing how to deploy them, again and again.

It means building the ability to automate better than your competition.

Identify the bottleneck

Part one

Choose the equipment

Which processes to automate, and with what

Part two

Install the line

Integration, commissioning and go-live

Part three

Staff and support it

People who can run it, fix it and improve it

Every automation project starts with the right process and the right equipment.

Large plants and small shops alike need to know what to automate first, and what it will take to get there.

Part two: Install the line

Choose capability & proven track record over brand

Part one

Choose the equipment

Which processes to automate, and with what

Part two

Install the line

Integration, commissioning and go-live

Part three

Staff and support it

People who can run it, fix it and improve it

A successful install turns new equipment into a reliable, working line.

Integration, commissioning and go-live lay the foundation your people will run, maintain and improve.

Part three: the human factor

Automation is also a people plan

Part one

Choose the equipment

Which processes to automate, and with what

Part two

Install the line

Integration, commissioning and go-live

Part three

Staff and support it

People who can run it, fix it and improve it

Every automated line needs people who can run it, fix it and improve it.

Plants starting out and plants modernizing face different versions of the same question: who will support this?

Three eras, 25 years apart

1975

Pure mechanical and relay logic

- Hardwired relays
- Mechanical gearboxes
- Hydraulic and pneumatic logic
- Analog gauges

Standard credential

High school diploma plus basic on-the-job apprenticeship

2000

Discrete automation

- Standalone PLCs and ladder logic
- Early variable-frequency drives
- HMI panels
- Basic robotic arms

Standard credential

Vocational certificate or specialized vendor training

2025

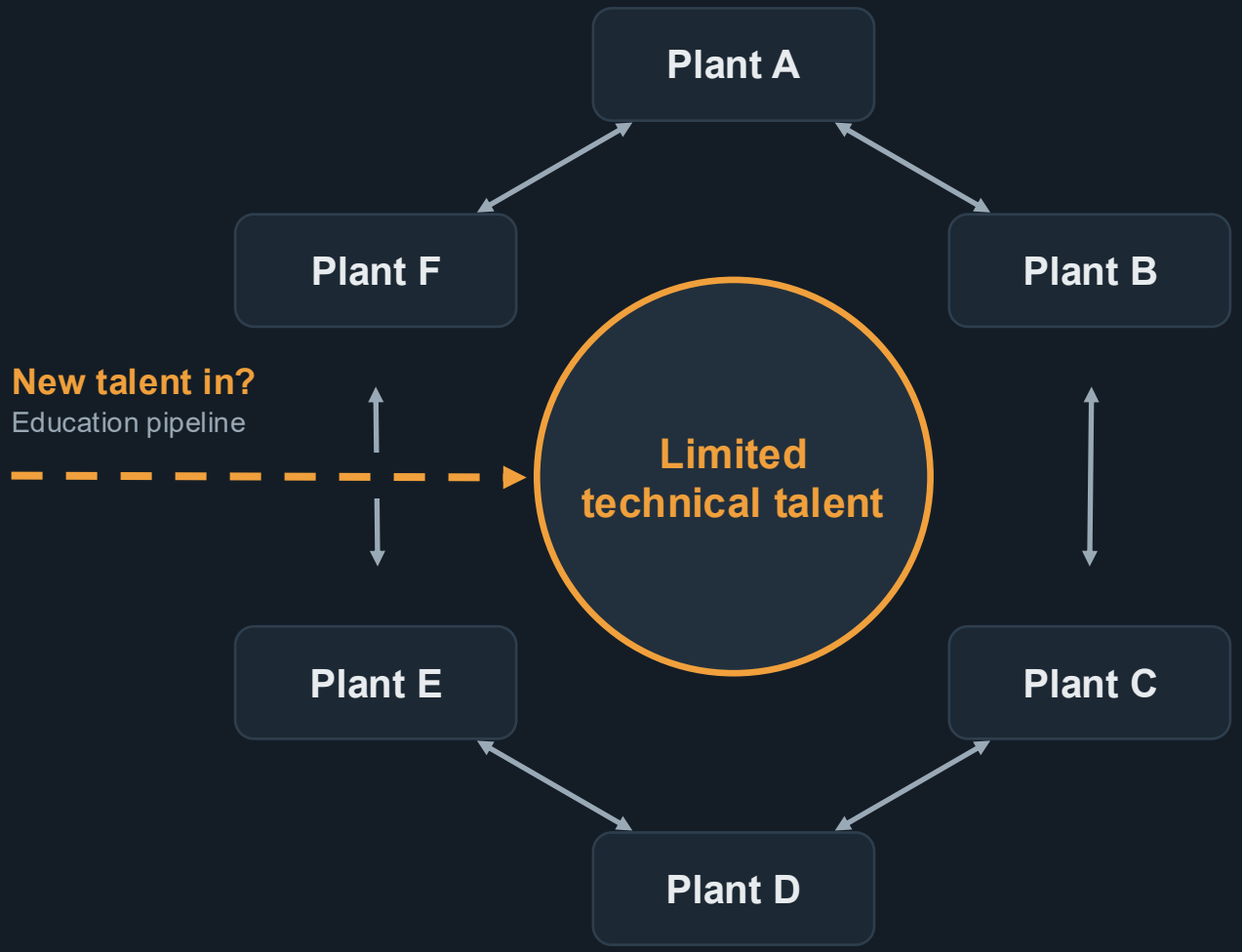
Connected automation

- Networked PLCs on EtherNet/IP
- Multi-axis, vision-guided robotics
- IIoT sensors and devices
- Predictive AI analytics

Standard credential

Bridgerland Automation Technology and Control Systems & Robotics certificates

You can’t hire your way out of the skills gap



Hiring without new talent

The same talent just moves from plant to plant.

Every technician one plant hires is a technician another plant loses. The pool only grows when new people enter it.

“Promote from within” only works when the training behind it is structured.

Why “hiring and promoting from within” no longer works

1975–1990 historical model

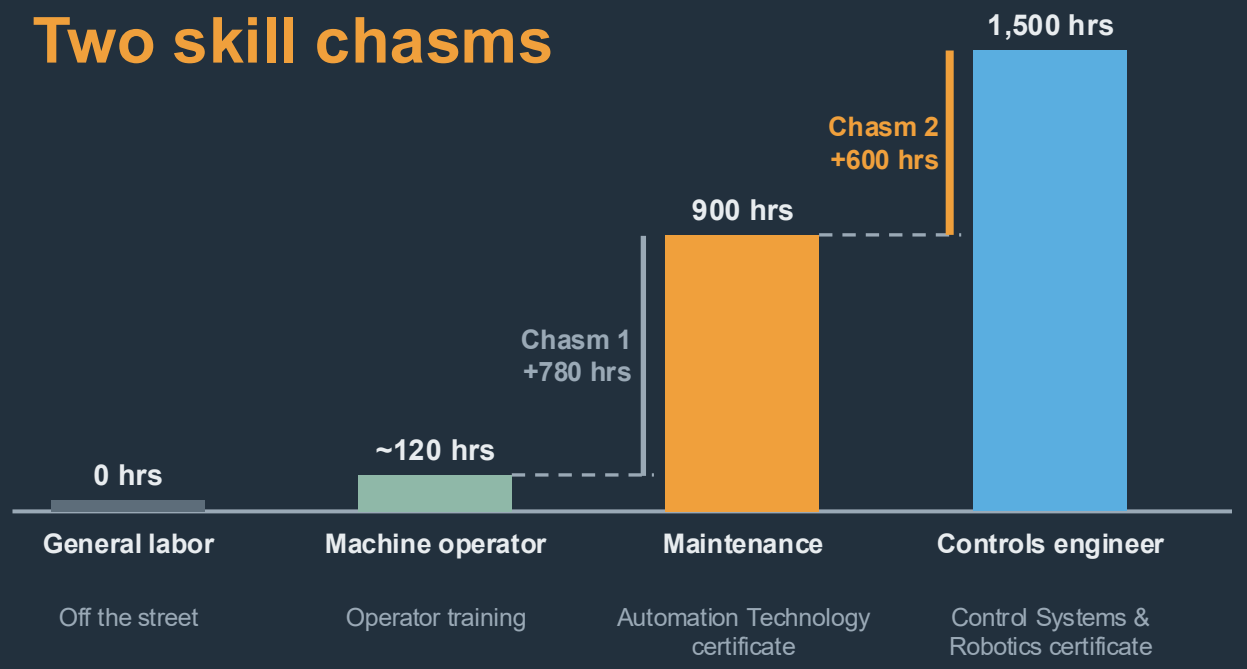
A short step



Workers were hired off the street into general labor, then recruited into maintenance. There was no operator training step, and controls engineering didn’t exist.

2025 modern reality

Two skill chasms



Every step now takes formal training: about 120 hours to operate, 900 to maintain and 1,500 to work in controls.

Takeaway Neither chasm is crossed by on-the-job promotion alone. It takes formal training.

Bar heights are scaled to entry-level training hours. 1975 maintenance uses the ~200-hour benchmark from the training hours slide.

Bear River Region: automation jobs vs. BTECH graduates

Annual job openings, March 2025 – March 2026. Source: Bear River Region ESA data.

Machine operators

346

Annual job openings

About 5× our annual graduates

Maintenance technicians

624

Annual job openings

About 8× our annual graduates

Controls techs and engineers

159

Annual job openings

About 2× our annual graduates



Are students even considering manufacturing?

Bear River Region high school students enrolled in at least one BTECH automation course this year.

1.2%

About 1 in 86 students

is taking even a single automation course while regional employers post 1,129 openings a year.

Each dot represents about 150 students



High school students
12,350 + ~500 home school

12,850

In BTECH courses
At least one course this year

~150

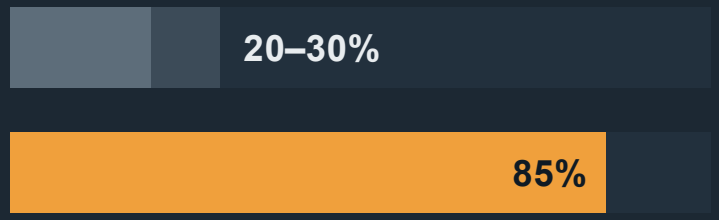
Counts students enrolled in or completing at least one BTECH automation course this year; manufacturing-related coursework elsewhere is not included.

A partner for both paths

The Bridgerland advantage: 3× educational density

85% hands-on | **3× learning density** | **100% competency-based**

Practical lab time



Hours to job-ready: 1,500 total



	Traditional degree model	BTECH competency model
Focus	Seat time and passive lectures	**Demonstrated skill mastery**
Format	Fixed semester pacing	**Self-paced and accelerated**
Result	2–4 years, limited hands-on troubleshooting	**Job-ready in 1,500 hours**

Key HR takeaway Industry doesn't need technicians who spent 6 years sitting in a lecture hall or who are spending years on the plant floor being forced to learn. Industry needs technicians who understand industrial systems, have a foundation in troubleshooting, have more advanced skills in PLCs, industrial robotics, and troubleshooting real fault conditions on the plant floor.