

*A foresight report*

# What Work Will Be Left

Deriving the skilling institution from the human-AI frontier | June 2026

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**2030-35**

**The horizon**

The build decisions this report serves

**05**

**Durable human areas**

Four capability gaps, plus care

**03**

**Demand clusters**

Trades, care, oversight

**73.2%**

**Informal-sector share**

Non-agriculture workers, PLFS 2023-24

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Twelve sections across the argument and the build

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## 00 | Executive summary

As machines take the routine cognitive middle, human value moves to the embodied and accountable

**The argument:** *As machines take the routine cognitive middle, human value moves to the embodied, situated, judgement-laden and accountable work that is the skilling sector's home ground. India's polytechnics, ITIs and skills universities are unusually well placed for the AI age, if they redesign for the human-AI frontier rather than the automatable middle.*

- **Reallocation, not contest:** the codifiable cognitive middle moves to machines; the embodied and accountable work stays human.
- **Conditional, and honest:** the case holds whether routine cognitive work is automated or merely augmented, the no-regrets bet.
- **Durable is not paid:** design for a livelihood, not only for defensibility against the machine.
- **A method, not a forecast:** a re-runnable way to read demand as the evidence moves.

# 01 | The foresight method

Read three signals together, never one

## CAPABILITY

- What machines can and cannot yet do, read from the gap between demonstration and sustained real use.

## DEMAND

- Where the volume of human work is growing, often driven by demography, not technology.

## LOCAL

- What employers within reach of the campus actually hire and pay for; gather it yourself.

## HOW TO USE THE THREE SIGNALS

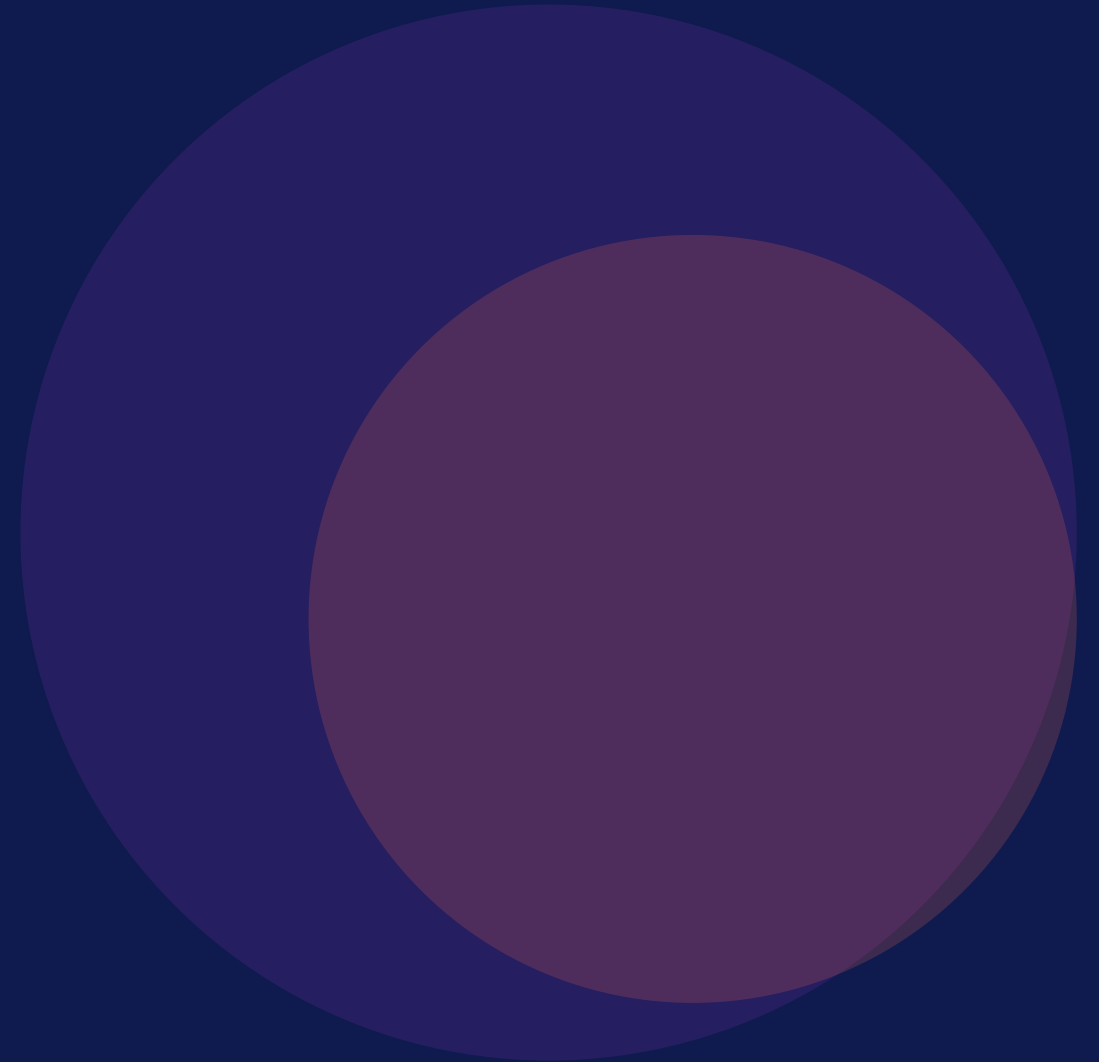
Commit where the three agree; investigate where they disagree. Grade every source SAFE, VERIFY or DIRECTIONAL, and re-run before each tranche of capital.



*Part one*

# The argument

What is changing, and what stays human.



## 02 | The reallocation

The work most exposed, and the work that stays human

### THE EXPOSED MIDDLE

- Routine, codifiable, desk-bound cognitive work: drafting, summarising, classifying, reconciling. The part a machine can now do.

### THE DURABLE FRONTIER

- Embodied, situated, judgement-laden, accountable work, and care. The home ground of the polytechnic and the ITI.

### THE DIRECTION OF THIS WAVE

The current wave of automation runs opposite to the industrial one. India, weighted toward physical and interpersonal work, sits at the lower-exposure end.

## 03 | The durable human contribution

Four areas stay human through 2030 to 2035, with care beside them

### THE HAND AND THE BODY

- Non-routine dexterity in places no two of which are alike. The firmest ground.

### THE UNSTRUCTURED JOB

- The job that fits no drawing; the real-world mess machines have not mastered.

### THE NOVEL CASE

- Judgement where there is no template and no clean metric to learn from.

### TRUST AND OVERSIGHT

- The accountable human who checks, signs and answers.

**And, beside them, care:** *The largest growing pool of human work, durable because demography drives its demand. It is female-dominated, so care design and women's access are one task.*

## 04 | The honest counter-case

The build decision holds under both readings of the future

### IF ROUTINE COGNITIVE WORK IS AUTOMATED

- Durable work concentrates in the hand, judgement, care and accountability.

### IF THE MACHINE MAINLY AUGMENTS

- Those who thrive are the ones who pair sound judgement with the tool.

**The no-regrets commitment:** *Both readings agree that judgement, presence, dexterity, care and the ability to work well with a machine appreciate in value. A builder can commit to the agreement without resolving the dispute.*

# 05 | From capabilities to livelihoods

Where human work grows, and what it pays

## THE SKILLED TRADES

- Electrical, plumbing, fitting, installation, maintenance, repair, field and site work.

## CARE AND HUMAN SERVICES

- Nursing, allied health, eldercare, early-childhood; the largest growing pool, on demography.

## OVERSIGHT AND VERIFICATION

- Quality assurance, safety, compliance, the accountable human in a machine-assisted process.

## JUDGE A PROGRAMME BY EARNINGS

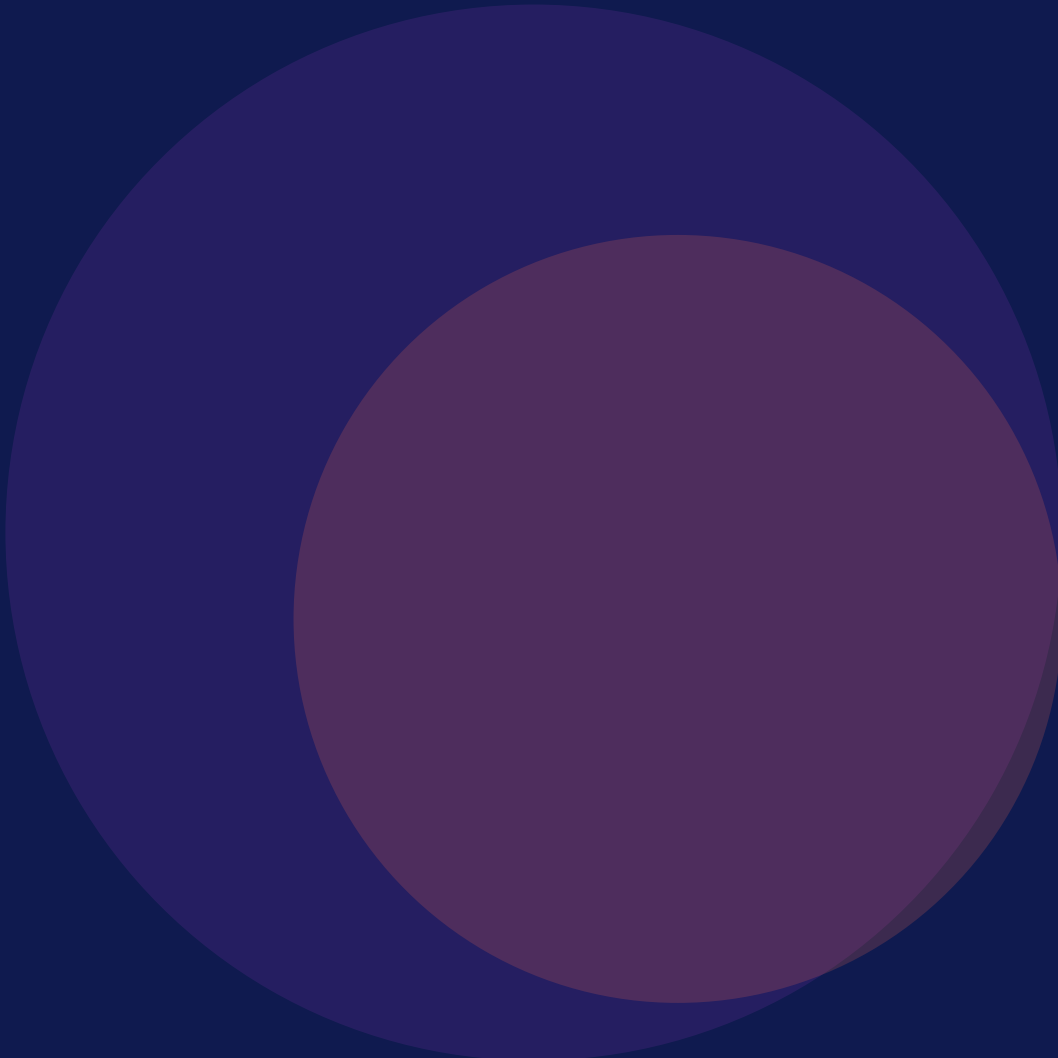
Durable is not the same as paid. Judge a programme by what its graduates actually earn, drawn from local data, not a national average.



*Part two*

# The build

Turning the frontier into an institution.



## 06 | The Indian picture

Point the existing scaffolding at the work that lasts

- **The pieces exist:** a national skills framework, a credit framework, polytechnics, ITIs, sector bodies and an apprenticeship system are already on the board, ready to be pointed at the durable work.
- **Sort the trades:** act-now defensible, exposed-middle, and a large verify-before-build group needing local data before any commitment of capital.
- **The informal reality:** 73.2 per cent of non-agriculture workers are in proprietary and partnership, informal-sector enterprises (PLFS 2023-24), so design for recognition of skill without a formal employer to vouch for it.

Defensible trade (DGT)	Why it endures
Electrician	Hand and body; accountability
Plumber	Hand and body; unstructured site
Fitter / Welder	Dexterity; inspection and safety
Mechanic (diesel / motor)	Field diagnosis, non-template
Nursing and allied health	Care; demography-driven demand

Trade names per DGT Craftsmen Training Scheme; mapping is the author's adjudication. Provisional; confirm against the live DGT catalogue.

## 07 | The build principle

Skilled trade plus AI orchestration (the author's term)

### THE HUMAN OWNS

- The hand and embodied skill, situated judgement, presence, trust, accountability and the sign-off.

### THE MACHINE CARRIES

- Retrieval of information, drafting a plan, the manual and the regulation, the record and the paperwork.

**The complementarity test:** *Genuine pairing has a signature: the graduate can still do the work without the machine, can explain why its suggestion is right or wrong, and can override it with authority. This catches the rubber stamp.*

## 08 | Curriculum and pedagogy

Every choice derived from the durable frontier

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- **Teach dexterity on the awkward:** the worn part, the non-standard fitting, not clean bench tasks.
- **Teach judgement through cases:** apprenticeship-led, not lecture-and-recall.
- **Pair every module with the machine:** and teach the student to judge and override it.
- **Assess in the mess:** a real or simulated job, defended aloud, not a paper test.
- **Credential the human in care:** the relational skill, not only the clinical task.
- **Stop teaching the obsolete:** prune the automatable middle; the discipline is what you drop.

## 08 | Infrastructure and faculty

Build where the learners actually are

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- **Teaming spaces, not robot showrooms:** trade equipment and a modest, reliable digital layer, not humanoid hardware.
- **Faculty is the binding constraint:** practitioners from working life; faculty, not buildings, limits growth.
- **Learn inside real work:** employer partnership from the start; build live sites where formal employers are scarce.
- **Design for the small town:** intermittent connectivity, thin faculty supply, lower employer density.
- **Women's access is a design input:** safe transport, hostels, scheduling; the largest growing cluster is female.

## 09 | The economics of a durable build

The heavier balance sheet is the moat

### DURABLE PHYSICAL BASE

- Trade equipment and workshops last many years. Fund as long-term capital.

### RENEWABLE DIGITAL LAYER

- The AI layer ages in a few years. Fund as a recurring, budgeted-for-replacement cost, never as a lathe.

- **Share the cost:** national skilling funds and state missions, CSR, apprenticeship reimbursement, employer co-investment, each mapped to the layer it is best placed to bear.
- **Judge by earnings:** a financing case that ignores what graduates earn is not a real case.

# 10 | Credentialing

Make capability legible, including in the informal market

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- **Stackable credentials:** map competences onto NSQF and the NCrF so a worker climbs in steps.
- **The orchestration credential:** certify the trained ability to use, judge and override the machine.
- **The accountable-signatory credential:** the trained, authorised human who signs off in a machine-assisted process.
- **Value without an employer:** customer-facing trust marks and platform recognition where work is found and booked.
- **Track earnings, not placements:** validate a credential by the livelihood it produces over time.

# 11 | The build decision

What to commit now under deep uncertainty

## COMMIT NOW

- Build for the durable frontier.
- Make every programme skilled trade plus AI orchestration.
- Solve faculty first.
- Design for small towns and women.
- Measure earnings.

## STAGE

- The precise mix of trades, on local data.
- The digital layer: buy light, renew often.
- Scale: follow the faculty you can secure.

## KEEP WATCHING

- Machine capability and real deployment.
- Regulation.
- Your graduates' earnings.
- A shift in these, not habit, triggers the next tranche.

## 12 | The scaffold and the evidence

Confirmed against primary sources

Confirmed figure	Source
NEP 2020: 50% of learners to have vocational exposure (para 16.5); milestone year now passed	NEP 2020, MoE
3,865 polytechnics; about 14.1 lakh stand-alone diploma enrolment	AISHE 2021-22
AICTE Act 1987; Approval Process Handbook 2024-25 to 2026-27	AICTE
36 Sector Skill Councils approved	NSDC
73.2% of non-agriculture workers in informal-sector enterprises	PLFS 2023-24, MoSPI
India has no general human-oversight mandate for automated decisions; accountability via the data fiduciary	DPDPA 2023, MeitY

*Rupee figures and per-trade wages are deliberately not shown; some scaffold counts (NSQF, NCrF, NCVET dates, ITI count) await gazette confirmation.*

# A | Glossary of authored terms

The coined terms and design tests used in this report

## COINED TERMS

### **Shunya Nigam / Zero-Person Company**

The author's term for the steadily leaner, eventually near-zero-headcount firm; extended here to labour.

### **Skilled trade plus AI orchestration**

The author's design principle: the human owns judgement and the hand; the machine carries retrieval and the record.

### **The complementarity test**

A graduate can work without the machine, explain it, and override it; the test that catches the rubber stamp.

## FRAMES AND HORIZONS

### **The durable frontier**

The capabilities that stay human through 2030 to 2035: the hand, the unstructured situation, the novel case, oversight, and care.

### **The exposed middle**

The routine, codifiable, desk-bound cognitive work machines are now most readily taking.

### **The no-regrets commitment**

Choices that hold under both the cautious and the optimistic reading of the future.

*The task ahead...*

# What only we can do.

The commit-now decisions for the skilling institution.

*The machines will keep getting better at what they do. Our task is to keep getting better at what only we can do, and to build the places that teach it.*

- 01 Build for the durable human frontier
- 02 Make every programme skilled trade plus AI orchestration
- 03 Solve faculty before buildings
- 04 Design for the small town, the informal market and women's access
- 05 Measure success by what graduates earn