The County That Built the *Mismatch*.

Hamilton County, Indiana — workforce scenarios 2025–2040 under demographic shrinkage, AI displacement, and reallocation friction. A locally-grounded answer to the Aidala-Ullrich framing, synthesizing three modules of original analysis.

THE THESIS

Hamilton County's decade of growth concentrated employment in the exact sectors AI is positioned to disrupt — Information, Financial Activities, Professional Services. Simultaneously, the sectors keeping the county functioning — healthcare, construction, education, government — face the steepest retirement bow wave and the lowest AI relief. The county built the mismatch as it built itself.

THE FINDING

Even under the Aidala-Ullrich replacement (worst-case AI) scenario, total Hamilton County employment grows 12.3% by 2040 — because population growth and in-migration overwhelm displacement. But the *composition* shifts dramatically. Information contracts 12.6%. Healthcare grows 17.9%. The Carmel/Fishers white-collar suburb identity is structurally diluted.

167,197
2025 BASELINE EMPLOYMENT

+12.3%
2040 GROWTH, REPLACEMENT

+26.8%
2040 GROWTH, AUGMENTING

3 sectors
CONTRACT UNDER WORST CASE

SECTION 01

Hamilton County, Carrying Both Sides

In May 2026, Indeed Hiring Lab economists Felix Aidala and Laura Ullrich published a national workforce projection arguing that the 2026–2040 U.S. labor market would be defined not by overall shortage or surplus, but by structural *mismatch* — sectoral unemployment in AI-exposed industries coexisting with persistent shortages in healthcare, construction, and government. The framing identified three forces — workforce aging, restricted immigration, and uneven AI advancement — and predicted that the policy challenge would be labor reallocation friction.

Hamilton County, Indiana, is the structural test case. The county's economic identity — Carmel and Fishers' decade of growth concentrated in finance, professional services, and information — placed its workforce on the front line of Aidala-Ullrich's AI displacement curve. Simultaneously, the institutional employers (Riverview Health, IU Health North, Ascension St. Vincent; six school corporations; county and four municipal governments; the trades pipeline supporting 217 active Fishers development projects alone) face the steepest retirement bow wave with no AI relief.

> *"The county built the mismatch as it built itself."*
>
> — The Great Mismatch Series, Module 2.4

This capstone module synthesizes three prior modules — the Retirement Bow Wave (2.1), the AI Exposure Index (2.2), and the Sectoral Permeability Audit (2.3) — into a sectoral employment scenario model spanning 2025 to 2040. It produces Hamilton County's locally-grounded answer to the Aidala-Ullrich publication: which sectors grow, which contract, by how much, and what the policy decisions of the next five years determine about the year 2040.

12.3%

HAMILTON COUNTY TOTAL EMPLOYMENT GROWTH 2025→2040, REPLACEMENT SCENARIO

Even under Aidala-Ullrich's worst-case AI displacement assumption, total Hamilton employment expands. But the composition transforms — three Bucket 2 sectors (Finance, Professional Services, Information) contract while shortage sectors (Construction, Healthcare, Education) absorb the population growth. This is the central capstone finding.

WHAT THIS REPORT DOES

This is a scenario model, not a forecast. It projects Hamilton County employment by 2-digit NAICS sector for 2032 and 2040 under two divergent AI scenarios (the Aidala-Ullrich replacement and augmenting cases), with sensitivity bounds on immigration assumptions and cross-sector reallocation friction. Inputs are entirely public-data-derived or licensed-via-Lightcast (per IHC compliance posture, May 2026).

GEOGRAPHY: Hamilton County, IN (FIPS 18057). Indianapolis-Carmel-Greenwood MSA (CBSA 26900) where MSA-level data is used.
WINDOW: Baseline 2025 (QCEW 2023 grown forward 2 years). Projection horizons 2032 and 2040.
CONCEPTUAL FRAME: Aidala & Ullrich (2026), *The Great Mismatch*, Indeed Hiring Lab.
SOURCE NOTES: `hamilton-implementation/academic-research/03-Labor-Market-Dynamics/Aidala-Ullrich-2026-Great-Mismatch-Indeed-HiringLab.md`.

SECTION 02

Aggregate Trajectories — Two Futures

Aidala-Ullrich's national framework bounds the AI uncertainty with two scenarios. The **replacement** scenario assumes AI substitutes labor in high-exposure occupations; the **augmenting** scenario assumes AI complements labor, producing minimal net displacement. We run both at the Hamilton County 2-digit NAICS level.

167,197
2025 BASELINE

170,026
2032 REPLACEMENT
+1.7% — population growth barely offsets AI displacement

183,061
2032 AUGMENTING
+9.5% — strong growth, AI complements labor

+24,205
RANGE 2040
Difference between scenarios by 2040 = ~24K jobs

SCENARIO	2025	2032	2040	Δ 2025–2032	Δ 2025–2040
Replacement (AI substitutes)	167,197	170,026	187,725	+2,830 (+1.7%)	+20,529 (+12.3%)
Augmenting (AI complements)	167,197	183,061	211,930	+15,865 (+9.5%)	+44,734 (+26.8%)
Difference (scenario uncertainty)	—	+13,035	+24,205	*13K jobs*	*24K jobs*

The headline result. Hamilton County employment *grows* in both scenarios. The Carmel/Fishers population engine, combined with continued in-migration and immigration, produces a structural worker inflow that

> the AI question for Hamilton County specifically. That's the size of the county's current Health Care sector employment.

SENSITIVITY BOUNDS — REPLACEMENT SCENARIO 2040

SENSITIVITY VARIANT	2040 TOTAL EMPLOYMENT	Δ VS. BASELINE REPLACEMENT
Baseline replacement	187,725	—
Immigration +50% (federal policy: continued/expanded)	196,951	+9,226
Immigration -50% (federal policy: restricted)	178,498	-9,227
Reallocation +30% (workforce retraining succeeds)	187,723	~0
Reallocation -30% (friction remains)	187,724	~0

Immigration is the dominant scenario variable — a ±50% swing produces ~±5% in 2040 total employment. Cross-sector reallocation friction (Module 2.3 finding) operates on a small base relative to total inflows, so its sensitivity is muted at aggregate level — but its sectoral redistribution effects are material (see Section 03).

SECTION 03

Where the Mismatch Lands — Sector Trajectories

Aggregate growth masks dramatic sectoral redistribution. The replacement scenario projects three Bucket 2 sectors (Information, PBS, Finance) into outright contraction by 2032, even as overall county employment grows. Bucket 1 shortage sectors absorb the population inflow. The "two-headed problem" framing from Module 2.2 is operationalized here.

REPLACEMENT SCENARIO — 2032 SECTORAL EMPLOYMENT CHANGE

Information (51)	2,141	-11.6%
Professional, Scientific & Technical (54)	14,082	-7.1%
Finance & Insurance (52)	15,414	-6.2%
Agriculture, Forestry, Fishing (11)	834	-1.7%
Wholesale Trade (42)	7,561	-1.0%
Retail Trade (44-45)	18,389	+1.1%
Manufacturing (31-33)	8,596	+1.4%
Public Administration (92)	4,760	+2.5%
Administrative & Support, Waste (56)	12,273	+3.2%
Health Care & Social Assistance (62)	24,082	+4.9%
Educational Services (61)	11,919	+4.9%
Construction (23)	10,042	+8.2%
Accommodation & Food Services (72)	19,422	+8.6%

Selected sectors shown for clarity. Full results in `by_sector_2032_2040.csv`. Bars centered at 2025 employment level; left of center = contraction, right of center = expansion.

THE CONTRACTING TRIO

Information (-11.6%), PBS (-7.1%), Finance (-6.2%) are the only sectors in net contraction by 2032 under replacement. These are precisely the sectors Aidala-Ullrich identified at the national level (Information -21.2%, Finance -11.8%, PBS -10.7%). Our local magnitudes are smaller than the national projections because Hamilton's continued population growth partly offsets AI displacement — but the directional finding is unambiguous and matches the national framework.

WHAT BUCKET 1 ABSORBS

Construction (+8.2%), Healthcare (+4.9%), Education (+4.9%), Public Administration (+2.5%) all grow under replacement by 2032 — even as they absorb the heaviest retirement bow wave (Module 2.1) and the most credentialing-bottlenecked replacement pipelines (Module 2.3). The growth comes from population-driven demand expansion, not because the shortages resolve. The shortages get worse in absolute terms even as employment grows — because demand grows faster than supply.

REPLACEMENT SCENARIO — 2040 SECTORAL EMPLOYMENT CHANGE

By 2040, the population-growth tide lifts most sectors above 2025 baselines. Bucket 2 contraction moderates (Information -12.6%, but Finance recovers to -2.1%). Bucket 1 growth becomes substantial (Healthcare +17.9%, Construction +24.4%, Education +18.0%).

NAICS	SECTOR	2025	2040	Δ	Δ %	BUCKET
51	Information	2,422	2,117	-305	**-12.6%**	AI-exposed
54	Professional, Scientific & Technical	15,156	14,615	-540	**-3.6%**	AI-exposed
52	Finance & Insurance	16,436	16,098	-338	**-2.1%**	AI-exposed
21	Mining, Quarrying, Oil & Gas	223	239	+16	+7.0%	Steady
42	Wholesale Trade	7,638	8,243	+606	+7.9%	—
53	Real Estate & Rental	4,573	4,952	+379	+8.3%	—
11	Agriculture, Forestry, Fishing	849	930	+81	+9.6%	—
55	Management of Companies	2,716	2,995	+278	+10.2%	—
44-45	Retail Trade	18,189	20,272	+2,083	+11.5%	Steady
31-33	Manufacturing	8,478	9,551	+1,073	+12.7%	—
81	Other Services (ex. Pub. Admin.)	4,973	5,652	+679	+13.7%	—
92	Public Administration	4,644	5,905	+1,261	**+27.2%**	Shortage
56	Administrative & Support, Waste	11,889	13,670	+1,781	+15.0%	—
62	Health Care & Social Assistance	22,968	27,080	+4,113	**+17.9%**	Shortage

61	Educational Services	11,366	13,410	+2,044	**+18.0%**	Shortage
71	Arts, Entertainment, Recreation	3,982	4,718	+736	+18.5%	—
22	Utilities	1,125	1,341	+215	+19.1%	—
48-49	Transportation & Warehousing	2,410	2,884	+474	+19.7%	—
72	Accommodation & Food Services	17,877	22,107	+4,230	+23.7%	Steady
23	Construction	9,282	11,544	+2,262	**+24.4%**	Shortage
TOTAL		**167,197**	**187,725**	**+20,529**	**+12.3%**	

Red rows: Bucket 2 AI-exposed sectors (contracting). Green rows: Bucket 1 shortage sectors (expanding into the credentialing-bottlenecked space). Gold row: Public Administration — the largest percentage gain among shortage sectors because it absorbed retirement and population-driven demand without strong cross-sector outflow.

SECTION 04

The Other Future — Augmenting AI

Aidala-Ullrich's augmenting scenario assumes AI complements labor rather than substituting for it: worker output rises, jobs remain, new role categories emerge. Under this scenario, Hamilton County's 2040 employment reaches 211,930 — 26.8% above 2025 baseline. Bucket 2 sectors do not contract; they grow modestly.

The 24,000-job difference between scenarios at 2040 is concentrated in three places. First, Finance & Insurance: 16,098 (replacement) vs. ~17,200 (augmenting). Second, Professional & Technical Services: 14,615 vs. ~16,100. Third, Information: 2,117 vs. ~2,400. These are the same three Aidala-Ullrich Bucket 2 sectors — the ones whose fate the AI-scenario question most directly determines.

Bucket 1 sectors are largely the same under both scenarios. Healthcare, Construction, Education, Public Administration grow at similar rates regardless of AI scenario because their employment trajectory is driven by population-side demand, not AI displacement. The county needs the workers either way.

The augmenting scenario does not eliminate the credentialing bottleneck identified in Module 2.3. The replacement task in Bucket 1 sectors is roughly the same: 3,549 hires/year. The augmenting scenario simply means Bucket 2 workers are not *displaced* from their current roles to make up the shortfall. The reallocation problem becomes a recruitment-from-elsewhere problem.

THE BUCKET 2 QUESTION

For Carmel and Fishers' Finance/PBS/Information sectors, the AI-scenario question is binary: do these sectors lose 6-12% of employment by 2032 (replacement), or grow 3-5% by 2032 (augmenting)? The answer determines whether the Carmel/Fishers "white-collar suburb" identity survives the next decade structurally intact or is materially diluted. **This is the policy stake of the AI conversation for Hamilton County specifically.**

WHAT SEPARATES THE TWO SCENARIOS IS NOT HAMILTON POLICY

The replacement vs. augmenting split is determined by factors largely outside Hamilton County's control: federal AI policy, employer adoption decisions at large firms (including the very corporate headquarters in Carmel/Fishers that drove the original concentration), and the path of AI capability development through 2030. Hamilton County cannot pick its scenario.

What Hamilton can control is the *response*: which programs prepare workers for either scenario; which institutional partnerships (Ivy Tech most centrally) can pivot under either scenario; whether the Bucket 1 credentialing pipeline expands fast enough to absorb either Bucket 2 displacement (replacement) or non-Bucket-2 worker inflows (augmenting). The Workforce Pell Alignment Protocol (May 2026, `ihc-`

`internal/governance/Workforce_Pell_Alignment_Evaluation_Protocol_2026.md`) is the operational framework for that response.

SECTION 05

What This Means for IHC's Portfolio

The Great Mismatch series produces a single integrated strategic picture for IHC. The implications are concrete and span the existing program portfolio, the Workforce Pell Alignment Protocol, and the Ivy Tech partnership.

SIX STRATEGIC IMPLICATIONS

1. **The Workforce Pell Alignment Protocol becomes the standing decision framework.** Every IHC program proposal, refresh, or restructure runs through the 7-step rubric (Workforce_Pell_Alignment_Evaluation_Protocol_2026.md). The capstone scenarios confirm that Bucket 1 credentialing demand will grow under both AI scenarios — making Workforce Pell-aligned program design the dominant near-term federal funding rail.
2. **The Ivy Tech partnership becomes a multi-program MOU, not a per-program negotiation.** Four restructure targets in the Workforce Pell Inventory (InvestAbility, InvestOnward, MDL, Re-Entry) all point to Ivy Tech as default partner. The capstone confirms sustained Hamilton Bucket 1 hire demand through 2040. A multi-program MOU with anticipatory written-arrangement structures is more efficient than sequential negotiation. Q3 2026 outreach to Christina Collins (Ivy Tech) — see Module 2.3 Appendix A for the co-brand expansion case.
3. **IHC as RAP Sponsor is the highest-leverage governance move.** The Re-Entry Workforce Initiative (Module 2.3 restructure target) justifies the ≤49% role only available to Registered Apprenticeship Program sponsors. The capstone confirms re-entry-friendly credential demand exists at scale (Construction +24.4% by 2040). The RAP-sponsor proposal moves to Q4 2026 with outside counsel review.
4. **The Readiness Assessment and Veterans Pathway become the discovery surfaces for Indiana Pell-approved programs.** As Indiana's Workforce Pell program list publishes (post-2026-07-20 effective date), these Bucket B tools surface the right programs to the right populations. Build wire-up follows Pause Directive close-out (target Q3 2026).
5. **The Manager Accelerator restructure conversation should happen.** The capstone's PBS contraction projection (-3.6% by 2040 under replacement; modest growth under

augmenting) means corporate management training demand is structurally uncertain. The Workforce Pell Inventory found MDL structurally incompatible at 16 contact hours; if Kate and IU Tobias choose to restructure MDL into a 150+ hour multi-cohort sequence, it could become the only Bucket 2-facing IHC program in the portfolio with a federal funding rail. The conversation is Q3 2026.

6. **Public Administration is the quiet emergency that should reach the Commissioners.** Module 2.1 found Public Admin's 16.6% six-year retirement rate; the capstone projects +27.2% Public Admin employment growth by 2040 under replacement (driven by population-side demand for county and municipal services). The replacement task is large and invisible to employer surveys because the employers are governments. A board-level briefing to Hamilton County Commissioners and the four municipal city managers (Carmel, Fishers, Noblesville, Westfield) is recommended Q3 2026.

WHAT THE SERIES DOES NOT PRESCRIBE

The Great Mismatch series does not prescribe specific program curricula, partner selections, MOU terms, or budget allocations. It produces the evidence base; the program design conversations happen with Kate, the partner organizations, and the V4 Decision Register. The series is structured to support multi-year decisions, not to substitute for them.

RECOMMENDED PUBLICATION PATH

This capstone is IHC-only IP per Mike's interim decision (Module 2.3 Q4 answer). If the Ivy Tech co-brand proposal (Module 2.3 Appendix A) advances in Q3 2026, Module 2.4 is the natural inflection point for joint publication. Until then, the entire Great Mismatch series stays IHC-only.

SECTION 06

Methodology & Limitations

This is a scenario model built from the three prior modules in the Great Mismatch series plus standard public demographic inputs. It is a first-tier v1 capstone — sufficient for board, partner, and elected-official briefings; not yet a peer-reviewable scenario model. A v2 version with finer NAICS detail, occupational disaggregation, and Lightcast Origin-Destination flows is queued for late 2026.

INPUTS

1. **Baseline employment.** QCEW Hamilton 2023 sectoral employment grown forward 2 years at 1.9% annually (BEA estimate for Hamilton 2023-2025 trend), producing 167,197 jobs across 20 NAICS sectors as of 2025.
2. **Retirement exits.** Module 2.1 Path C projections (Hamilton-specific via Lightcast Industry Demographics Table 2026-05-21) for 2026-2032. Extended to 2033-2040 with a 0.65x decay factor (Boomer cohort moving to age 80+).
3. **AI displacement.** Calibrated to Aidala-Ullrich (2026) national magnitudes by 2032: Information -21.2%, Finance -11.8%, PBS -10.7%. Per-sector AI displacement = baseline 2025 × k × E1 exposure, where k = 0.254 is averaged across the three calibration sectors. E1 from Module 2.2 (Eloundou SOC-6 scores × BLS-OES May 2024 MSA 26900). Augmenting scenario = 5% of replacement displacement (AI complements labor; per Aidala-Ullrich offsets ~11% of demographic losses).
4. **Population inflows.** Three sources annually:
    - Native cohort entries: 1,100/year (ACS 16-19 → 20-24 progression for Hamilton)
    - Domestic in-migration: 3,800/year net workers (IRS-SOI 5-year average)
    - Immigration: 1,230/year (Hamilton's 0.3% share of national 410K assumption)

    Total annual inflow: 6,130 workers. Distributed across sectors 70% by employment share / 30% by absolute retirement count.

5. **Cross-sector reallocation.** Baseline 25% of AI-displaced Bucket 2 workers reallocate to Bucket 1 shortage sectors. Reallocation distributed proportionally to shortage-sector retirement need. Sensitivity bounds ±30%.

LIMITATIONS

1. **2-digit NAICS aggregation.** Within-sector heterogeneity is substantial (e.g., NAICS 54 PBS contains both highly-exposed sub-industries like accounting and computer systems design, and moderately-exposed ones like architecture/engineering). 3- and 4-digit drilldowns are achievable with the same data sources and would be the natural v2 expansion.
2. **AI displacement calibration is global, not sector-specific.** A single k = 0.254 coefficient is applied across all sectors, derived from Aidala-Ullrich's three named sectors. Sector-specific displacement elasticities may differ from this average. Refinement requires either Aidala-Ullrich's full underlying model parameters (not published in detail) or sector-by-sector empirical estimates from other published AI labor-market research (Acemoglu 2024, Hampole et al. 2025 — both in `academic-research/07-Technology-AI-Skills/`).
3. **Inflow distribution model is parametric.** The 70/30 employment-share/retirement-need split is a parametric choice with limited empirical anchoring. Real labor market matching is more complex — driven by relative wages, geographic access, skills, and credential availability. The simplification produces directionally correct sectoral redistributions but the absolute year-by-year volumes carry parametric uncertainty.
4. **No occupational layer.** This model operates at the 2-digit NAICS level and does not project occupations. The reallocation feasibility question — whether a displaced Finance worker can credibly become an RN, a teacher, or an electrician — requires the occupational layer, which is itself a Module 2.4 v2 deliverable.
5. **Geographic effects within Hamilton not modeled.** The model treats Hamilton as a single labor market. Within-county geography matters (Carmel/Fishers concentration in Bucket 2; Noblesville/Westfield more institutional). Submarket modeling is achievable but not in this v1.
6. **No labor-supply price response.** The model treats inflows as fixed quantities rather than wage-responsive. In real markets, persistent shortages drive wages up and pull additional workers in. This omission likely understates Bucket 1 sector growth (a price-response model would show higher growth under tighter labor conditions).

WHAT V2 (2026 H2) SHOULD ADD

- 3-digit and 4-digit NAICS drilldowns for the four shortage sectors

- Occupational projection layer (employment × SOC-6 × NAICS) using BLS-OES + Eloundou exposures
- Sector-specific AI displacement coefficients via Acemoglu 2024 + Hampole 2025
- Within-Hamilton geographic decomposition (Carmel/Fishers vs. Noblesville/Westfield labor markets)
- Wage-responsive labor supply (price elasticity per sector)
- Lightcast Origin-Destination data for true destination-specific permeability

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INPUTS: `hamilton-implementation/data/federal/BLS-QCEW/qcew_hamilton_2023.json`; Module 2.1 Path C results; Module 2.2 E1 by NAICS; Module 2.3 permeability findings.
ANALYSIS CODE: `hamilton-implementation/analyses/county-that-built-the-mismatch-2026/analysis.py`.
RESULTS: `results.json`, `by_sector_2032_2040.csv`.
CONCEPTUAL FRAME: Aidala & Ullrich (2026), *The Great Mismatch*; Eloundou et al. (2023); Holzer (2025); Brookings AI Career Pathways (2026).
MASTER PLAN: `ihc-internal/strategy-internal/Hamilton_County_Great_Mismatch_Local_Study_Plan_2026.md`. This is Module 2.4 of four (capstone).