



METHODOLOGY WHITEPAPER · 2026 EDITION

# Benefits Intelligence.

How Invest Hamilton County analyzes the employer  
benefits landscape.

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WHERE INSIGHT BECOMES ACTION

## Executive Summary

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The Benefits Intelligence module is an **Alex / Hamilton County Data Hub** capability that produces one-off branded reports comparing an individual employer's benefits package against three reference layers: federal benefits incidence (BLS National Compensation Survey), federal employer cost benchmarks (BLS Employer Costs for Employee Compensation), and metropolitan-area job-posting language (Lightcast Job Posting Analytics). It also produces aggregate community-landscape reports, research briefs, and methodology documentation for academic and journalistic use.

This whitepaper documents the methodology — the data sources, the engine architecture, the antitrust compliance posture, and the operational rules that govern every report Invest Hamilton County publishes under this capability. It is intended to serve as the citable reference for anyone using Benefits Intelligence outputs, including:

- HR leaders at Hamilton County employers reviewing their gap reports
- Site selectors and corporate real estate teams using the community landscape
- Academic researchers and policy analysts citing aggregate findings
- Journalists covering Hamilton County workforce stories
- Peer economic development organizations evaluating similar capabilities

### THE STANDING DISCIPLINE

This capability provides individual employers with aggregated public-data answers to the question "*where is the market?*" It does not facilitate coordinated action between groups of employers. Reports are always **one employer ↔ aggregate market data** or **aggregate community ↔ public audience**.

There is no peer-to-peer benchmarking, no collective recommendation to participating employers, and no employer-level disclosure.

# 1. Data Sources

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The module integrates four primary data sources. Each source has a distinct role in the analysis, governed by specific compliance treatment.

## 1.1 BLS National Compensation Survey (NCS)

The U.S. Bureau of Labor Statistics National Compensation Survey is the federal government's annual measurement of employee benefits incidence – the percentage of private-industry workers with access to specific benefits, broken down by industry (NAICS 2-digit), occupational group, employer size, and region. The March 2024 release (published September 2024) provides the most recent national reference data.

Coverage: **23 industries** at NAICS 2-digit, **28 distinct benefit categories**. Source URL: [bls.gov/ncs/ebs/](https://bls.gov/ncs/ebs/). Refresh cadence: annual.

## 1.2 BLS Employer Costs for Employee Compensation (ECEC)

BLS ECEC reports employer costs per hour worked across major benefit categories – paid leave, supplemental pay, insurance, retirement, legally-required (Social Security, Medicare, unemployment, workers' compensation). Reported quarterly with ~50-day publication lag. The Q4 2024 release (published March 2025) is the active baseline.

Coverage: **23 NAICS industries × 9 cost categories**. Multiplied by 2,080 hours per year for full-time annual cost estimates. Source URL: [bls.gov/ncs/ect/](https://bls.gov/ncs/ect/). Refresh cadence: quarterly.

## 1.3 Lightcast Job Posting Analytics

Lightcast's labor market intelligence platform parses every public job posting in the United States and tags it with skills, occupations, industries, and benefit-related keywords (medical insurance, 401k match, paid parental leave, remote work, tuition reimbursement, and ~280 additional benefit-related skill tags). For Indianapolis MSA postings (CBSA 26900), Invest Hamilton County maintains a Lightcast license that includes Job Posting Analytics, Skills Analysis, Compensation Analysis, and Career Pathways modules.

Posting language is the most current signal of the active hiring market – what competing employers are using to attract candidates. Coverage: **11 NAICS × employer-size cells** in the Indianapolis MSA. Refresh cadence: quarterly.

## 1.4 IRS Form 5500 Filings (DOL EFAST)

Form 5500 filings are annual reports filed by employers to the U.S. Department of Labor for retirement and welfare benefit plans (Section 401(k), defined benefit pension, health and welfare plans for employers with 100+ participants). Filings are public record under ERISA Section 104(a)(1) and disseminated through the DOL EFAST2 system.

Coverage: **23 NAICS sectors** in Indiana state (~7,800 plan filings); Hamilton County subset of **14 NAICS sectors**. Source URL: [efast.dol.gov/portal/app/disseminatePublic](https://efast.dol.gov/portal/app/disseminatePublic). Refresh cadence: annual (December release for prior plan year).

**Compliance note:** While Form 5500 data is per-employer public record, the Benefits Intelligence module treats it as restricted: per-employer disclosure is permitted only in self-validation flows (an employer querying their own filing) and in aggregate cross-tabulations enforced at the  $\geq 10$ -employer floor. This is a discipline above what public-records law requires. See Section 4.

## 2. Engine Architecture

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The module's analytical layer is composed of four Python modules, each with explicit ASSUMPTIONS dictionaries that version with the data taxonomy. Reports are rendered through a Jinja2 → WeasyPrint pipeline that applies the IHC Design System v2 brand tokens.

### 2.1 Aggregation Floor (engine/aggregation\_floor.py)

Every query against benefits data — whether for an employer gap report, a community landscape, or a research brief — routes through the aggregation floor before any data access. The floor enforces the operational compliance posture by validating: minimum cell size, maximum single-employer concentration, minimum data lag, and prohibited query dimensions. Queries that fail are suppressed; the report shows a "suppressed for compliance" placeholder with the specific rule that triggered suppression. Every enforcement decision is audit-logged.

### 2.2 Gap Engine (engine/gap\_engine.py)

Per-employer gap analysis. Inputs: a structured employer survey (filled by IHC staff from a phone call or email exchange with the HR contact), the employer's 2-digit NAICS, the workforce size band, and the geography of analysis. Outputs: a structured gap report with one row per benefit in the taxonomy showing the employer's offer status, the MSA aggregate incidence, the national NAICS aggregate, and a priority classification.

Priority thresholds: **high** when employer is  $\geq 25$  percentage points below market incidence on a benefit; **medium** at  $\geq 10$ pp; **low** at  $\geq 5$ pp. Negative gaps (employer offers above market) become **competitive advantages**.

### 2.3 Landscape Engine (engine/landscape\_engine.py)

Community-level aggregate analysis. Iterates across the full benefits taxonomy × multiple NAICS × multiple size bands × four geography tiers (Hamilton County, Indianapolis MSA, Indiana, National). Every cell is enforced through the aggregation floor; suppressed cells are reported as such in the landscape document for transparency. The output is the basis of the annual *Hamilton County Benefits Landscape Report* as well as ad-hoc research briefs.

### 2.4 Monetization (engine/monetization.py)

Converts a benefits package to dollar values for the Total Compensation View. Combines BLS ECEC quarterly cost-per-hour benchmarks (for healthcare, retirement, paid leave) with employer-supplied benefit values (for retirement match percentages, vacation days, parental leave weeks) and \$45F / \$125 / \$127 tax-treatment math. Produces per-FTE annual values, employer-total annual values, and a benefits-as-percentage-of-total-compensation calculation.

### 3. The Benefits Taxonomy

The taxonomy is the data dictionary that allows consistent comparison across BLS NCS, BLS ECEC, Lightcast posting language, IRS Form 5500, and employer survey input. v1 covers **12 categories and ~40 individual benefits**:

Category	Benefits
<b>Healthcare</b>	Medical · Dental · Vision · HSA / FSA
<b>Retirement</b>	401(k) / 403(b) · Employer match · Pension / DB · Profit-sharing / ESOP
<b>Paid Time Off</b>	Vacation · Sick · PTO bank · Parental leave · Bereavement
<b>Family Care</b>	DCFSA · Backup care · Stipend · Reserved slots · Tri-Share · Onsite facility · Adoption · Eldercare
<b>Behavioral Health</b>	EAP · Mental health visits · Wellness stipend
<b>Disability &amp; Life</b>	STD · LTD · Life insurance
<b>Financial Wellness</b>	Student loan repayment · Financial coaching · Emergency savings
<b>Education &amp; Development</b>	Tuition reimbursement · Certifications · Conference budget
<b>Workplace Flexibility</b>	Remote · Hybrid · Flex hours · Sabbatical
<b>Recognition &amp; Performance</b>	Performance bonus · Equity / stock · Peer recognition
<b>Lifestyle</b>	Pet insurance · Commuter / transit · Onsite amenities
<b>Identity &amp; Inclusion</b>	Fertility / IVF · Gender-affirming care · ERGs / DEI

Each benefit in the taxonomy is mapped to (1) its BLS NCS series ID where applicable, (2) the Lightcast skill tags that signal its presence in posting language, (3) the IRS Form 5500 form codes where applicable, (4) its tax basis, and (5) the monetization method used to convert the benefit to dollars.

The taxonomy is reviewed annually each March alongside the BLS NCS release. Anything Lightcast has begun tagging that doesn't have a taxonomy entry is a candidate for addition.

## 4. Antitrust Compliance Posture

The Department of Justice and Federal Trade Commission have actively pursued criminal enforcement against employers that share wage and benefits data in ways that facilitate coordinated action — this is the single highest-risk category in HR antitrust and the binding constraint that shapes every aspect of Benefits Intelligence design.

The operative federal guidance remains the 1996 DOJ/FTC *Statement of Antitrust Enforcement Policy in Health Care, Statement 6*, which established the safe harbor for benchmarking exchanges of wage and benefits data. The 2016 DOJ/FTC *Antitrust Guidance for Human Resource Professionals* reaffirmed the framework and announced criminal escalation for no-poach and wage-fixing arrangements. Subsequent indictments (2022–2024) demonstrate that this is enforced practice, not theoretical risk.

Invest Hamilton County's operational floor is intentionally **more conservative than the DOJ/FTC safe harbor**:

Compliance Rule	DOJ/FTC Safe Harbor (1996)	IHC Operational Floor
Minimum employers per cell	≥5	≥10
Maximum single-employer concentration	≤25%	≤20%
Minimum data lag (postings)	≥3 months	≥6 months
Minimum data lag (IRS 5500 cross-tabs)	≥3 months	≥12 months
Employer-level disclosure	Permitted with consent	Never
Survey-input pooling	Permitted in aggregations	Optional and one-way

The operational principles that follow from these rules:

- 1. Reports are always individual.** A gap report serves one employer; a landscape report serves the public; a research brief serves a researcher. There is no report whose audience is a group of competing employers receiving the same recommendation.
- 2. The output is descriptive, not prescriptive-collective.** Reports describe where the market is and the position of the individual recipient, not what a group of employers should collectively do.
- 3. Employer-level disclosure is never permitted,** even when the underlying record is public (Form 5500). The discipline holds because aggregating multiple public records into a competitive intelligence product is not the same activity as publishing the raw records.
- 4. Survey input is a one-way contribution.** An employer's survey response feeds their own gap report only. It does not feed into another employer's view, even with consent.
- 5. Every query is audit-logged.** Every `aggregation_floor.enforce()` call writes to `audit-log/queries.jsonl`, allowing post-hoc reconstruction of every report's data lineage.

## WHERE THE BRIGHT LINE IS

The bright line is collective recommendation. We never produce a report that tells a group of employers, "the market consensus is X, so here is what you collectively should do." We do produce reports for individual employers showing where they stand against an aggregated public-data view of the market – leaving each employer to make their own decision with the same access to good information that a deep-pocketed Fortune 500 enjoys.

## 5. The Four Report Types

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Benefits Intelligence produces four report types, each with a distinct audience and compliance treatment.

### 5.1 Methodology Whitepaper (this document)

Public methodology reference. Establishes Invest Hamilton County as the citable source for Hamilton County and Indianapolis MSA benefits data. Refreshed annually with the BLS NCS release. Version history maintained in `spec.md` and `decision-record.md`.

### 5.2 Hamilton County Benefits Landscape Report

Annual public report on the state of benefits in Hamilton County, with comparison to Indianapolis MSA, Indiana statewide, and national figures. Aggregate-only output; every cell enforced through the aggregation floor. First edition: 2026 baseline. Quarterly summary refreshes between annual editions.

### 5.3 Employer Gap Report

One-off, employer-specific. Confidential. Generated on request. Inputs: structured employer survey + their NAICS and size band. Output: branded PDF showing benefit-by-benefit gap analysis, priority ranking, total compensation view, and competitive advantage callouts.

### 5.4 Research Brief

One-off, narrow-topic. Generated for academic researchers, journalists, peer economic development organizations, and policy analysts. Aggregate-only output; antitrust floor enforced. Citable, with full methodology disclosure.

## 6. Integration with the Alex Suite

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Benefits Intelligence is not a stand-alone product. It is a capability of the Alex / Hamilton County Data Hub that integrates with the existing employer-services suite. Key integration points:

- **Childcare ROI Calculator** (Component 02 of the Childcare Expansion) is the prototype engine pattern; the Benefits Intelligence Gap Engine extends it to all 12 benefit categories.
- **BLS OES wage curves** (Site Intelligence Workforce tab) are paired with monetized benefits to produce the Total Compensation View on every employer gap report.
- **Career ladders** (Lightcast Q1 2026 Career Pathways) provide occupation-specific benefit context – e.g., RN postings in MSA mention 401(k) match in 87% of cases vs. 64% MSA-wide.
- **Culture Diagnostic** (Hercules / IHC Business Services) can provide diagnostic-driven priority weighting on benefit recommendations – e.g., an organization with low engagement on Pattern 5 (Outdated Performance Systems) gets benefits recommendations weighted toward continuous-feedback tools.
- **Site Intelligence Workforce tab** gains a Benefits Landscape view for site selection prospects.
- **Hercules-BRE** gains a 9th BRE pattern: "Benefits Competitive Gap" – flagged when an employer's benefits package is more than two standard deviations below the MSA NAICS median.

## 7. Citation, Limitations, and Refresh Cadence

### 7.1 How to cite

Invest Hamilton County. (2026). *Benefits Intelligence Methodology Whitepaper, v1.0*. Carmel, IN: Alex Hamilton County Data Hub.

### 7.2 Known limitations

- BLS NCS reports national rates; the module uses Hamilton County / Indianapolis MSA Lightcast posting concentration adjustments to derive MSA-specific incidence. The adjustment introduces some uncertainty ( $\sim\pm 3$  percentage points) for rare benefits.
- Hamilton County alone often has insufficient employer count for the  $\geq 10$ -employer floor on narrow segments. Indianapolis MSA is the primary segment; Hamilton County is a secondary callout where data permits.
- Lightcast posting language is a leading indicator of what employers are *marketing*, not necessarily what every current employee actually has access to. Employers may offer benefits not mentioned in postings, and may overstate marginal benefits in postings.
- IRS Form 5500 covers only retirement and welfare plans for employers above filing thresholds; it does not capture benefits not subject to ERISA.
- Survey input depends on HR self-reporting accuracy. Cross-validation against IRS 5500 is offered where applicable.

### 7.3 Refresh cadence

Source	Cadence	Trigger
BLS NCS	Annual	September publication
BLS ECEC	Quarterly	~50 days post-quarter-end
Lightcast Job Posting Analytics	Quarterly	Lightcast bulk export refresh
IRS Form 5500 (DOL EFAST)	Annual	December publication for prior plan year
Benefits taxonomy	Annual	Aligned with BLS NCS release
This whitepaper	Annual	Following each annual data refresh

# Compliance Statement

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*This methodology document is published by Invest Hamilton County to establish a transparent, citable foundation for the Benefits Intelligence module. All data sources are aggregate (BLS NCS, BLS ECEC) or aggregated under the operational antitrust floor (Lightcast Job Posting Analytics, IRS Form 5500). No employer-level data is disclosed in any output produced by this module. Reports are always one employer ↔ aggregate market data, or aggregate community ↔ public audience. Coordinated action between groups of employers is never facilitated. Audit-logged.*

## SOURCE MATERIALS & SPECIFICATIONS

**Module specification:** hamilton-implementation/data/benefits-intelligence/spec.md

**Decision record:** hamilton-implementation/data/benefits-intelligence/decision-record.md

**Taxonomy:** taxonomy/benefits\_taxonomy.json (v1.0.0)

**Aggregation floor:** engine/aggregation\_floor.py (v1.0.0)

**Engines:** engine/gap\_engine.py · engine/landscape\_engine.py · engine/monetization.py

**Pipelines:** pipelines/pull\_bls\_ncs.py · pull\_bls\_ecec.py · pull\_irs\_5500.py · extract\_lightcast\_benefits.py

**Audit log:** audit-log/queries.jsonl (append-only)