The Future is Integrated: IBP Insights from Georgia Tech

Discover strategies for unlocking business potential through integrated alignment of operations, supply chain, and finance

LUNCH AND LEARN

Thursday, August 7, 2025 | 12pm ET

Thank you for attending

Manpreet Hora

Chris Gaffney

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Supply Chain and Logistics Institute

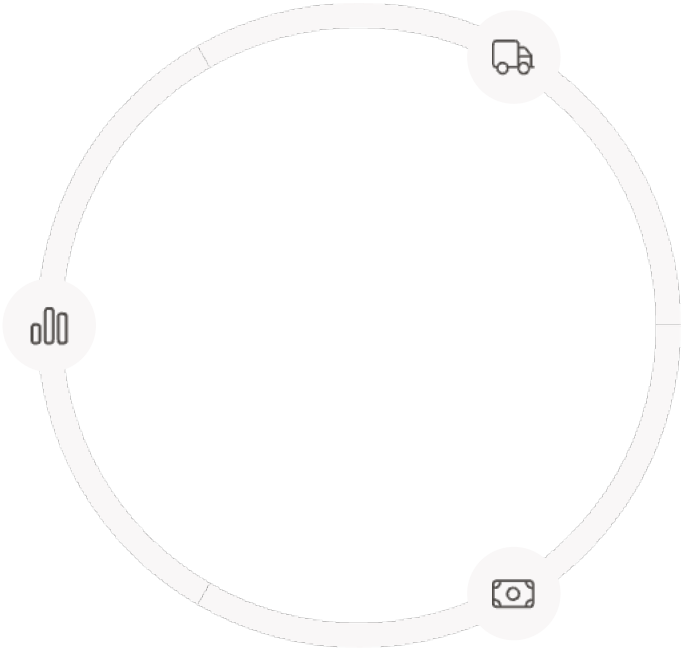
Themes for Today

- **Why IBP is critical now**
- **What IBP really looks like in practice**
- **Lessons from the field**
- **How AI and advanced analytics are changing the landscape**
- **Breaking through resistance**
- **Tools and actions you can use today**

What is IBP and Why it Matters

Demand Planning

Forecasting, market analysis, and product portfolio management to anticipate customer needs and market shifts



Supply Planning

Production, inventory, logistics, and capacity planning to ensure efficient delivery of products and services

Financial Planning

Budgeting, cash flow management, and financial goal alignment to ensure profitable operations

Integrated Business Planning aligns these traditionally siloed elements into one cohesive process, creating a single source of truth for organizational decision-making. This integration enables more accurate strategy execution, robust scenario planning, and enhanced agility in responding to market changes.

Companies implementing mature IBP processes report 5-15% inventory reductions, 2-5% margin improvements, and significantly faster response times to market disruptions.

Global Supply Chain Landscape: Headwinds, Tailwinds & Complexity

Headwinds

Today's supply chains face unprecedented challenges from geopolitical unrest, persistent inflation, and critical labor and transportation shortages that disrupt flow of goods across global networks.

Tailwinds

Accelerated technology adoption including AI, IoT, and advanced analytics is transforming operations, while collaborative supply networks enhance resilience through shared visibility and coordinated planning.

Complexity

Multi-tier global networks, constantly shifting regulatory landscapes, and increasingly volatile demand patterns create a complexity that requires sophisticated planning tools and processes.

These intersecting forces make traditional planning approaches insufficient for modern business requirements. Organizations need integrated systems that can adapt to rapid changes while maintaining strategic alignment.

Supply Chain Risks and Challenges

Top 5 Supply Chain Challenges in 2025

Trade Route disruptions

Protectionism in geopolitics play out in the form of trade wars and tariffs that impact industries. Regional conflicts also result in trade route disruptions, leading to longer transit time and higher costs.

Climate change

Today, a billion-dollar extreme weather event occurs every few weeks. Weather is the cause of 23% of all road delays in the US, costing trucking companies between $2-$3.5 billion annually.

Friend-shoring and Nearshoring

Geopolitical strategies, environmental policies and consumer demand for faster delivery times will continue to drive a shift from global supply chains to more localized networks of buyers and suppliers.

Skills gap for AI & ML

AI and machine learning (ML) systems heavily depend on high-quality data to function effectively. As companies embark on transformation, they will struggle to train or hire the right talent to manage and oversee AI systems productively.

Automation

Companies face tough decisions about the balance between automation and workforce, as well as the potential layoffs, labour strikes and union negotiations that may result. Finding a middle ground while minimising disruption will be the challenge.

CARGOBASE

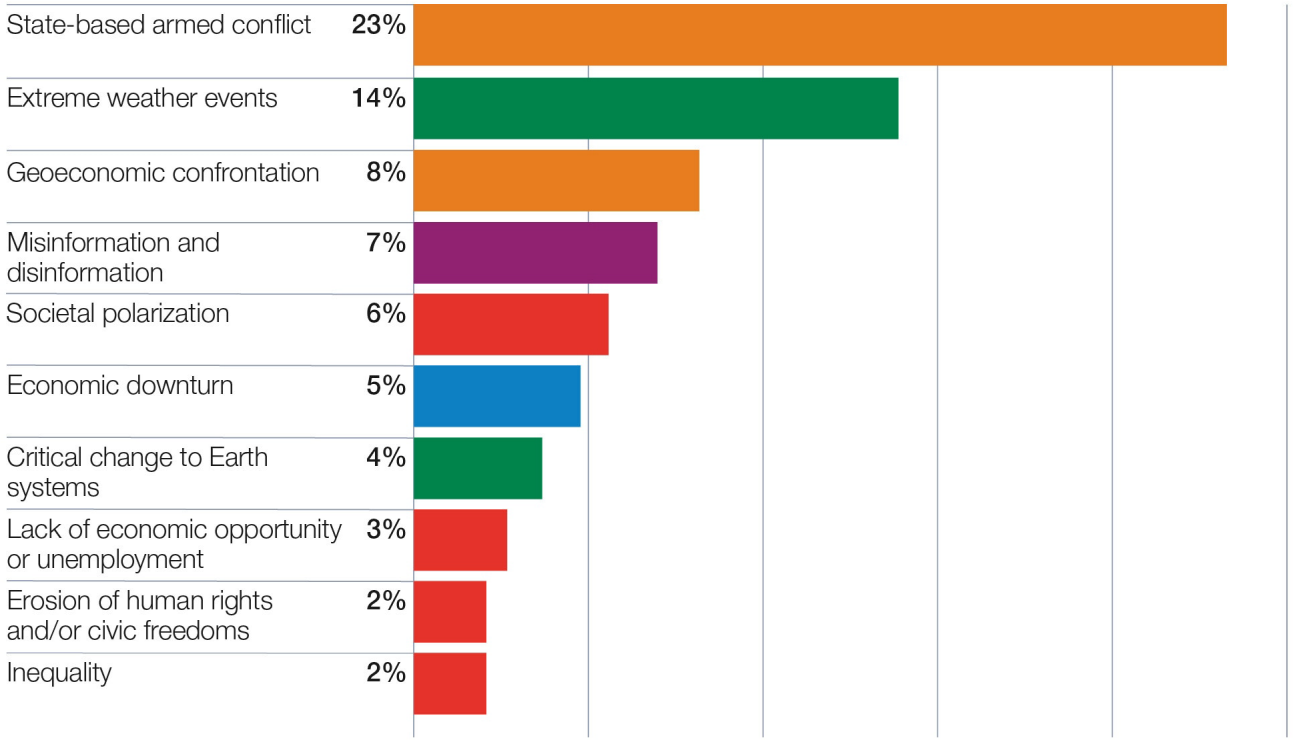
Global Risks Report 2025

Current Risk Landscape

WORLD ECONOMIC FORUM

Please select one risk that you believe is most likely to present a material crisis on a global scale in 2025.

Top 10 risks selected by respondents (Share of respondents %)



Risk categories Economic Environmental Geopolitical Societal Technological

Source: World Economic Forum, Global Risks Perception Survey 2024-2025

Components of World-Class IBP

People

- Executive sponsorship
- Cross-functional skills
- Collaborative mindset

Process

- Structured planning cycle
- Clear roles and responsibilities
- Decision frameworks

Data

- Quality and consistency
- End-to-end visibility
- Single source of truth

Technology

- Integrated tools
- Real-time dashboards
- Scenario modeling

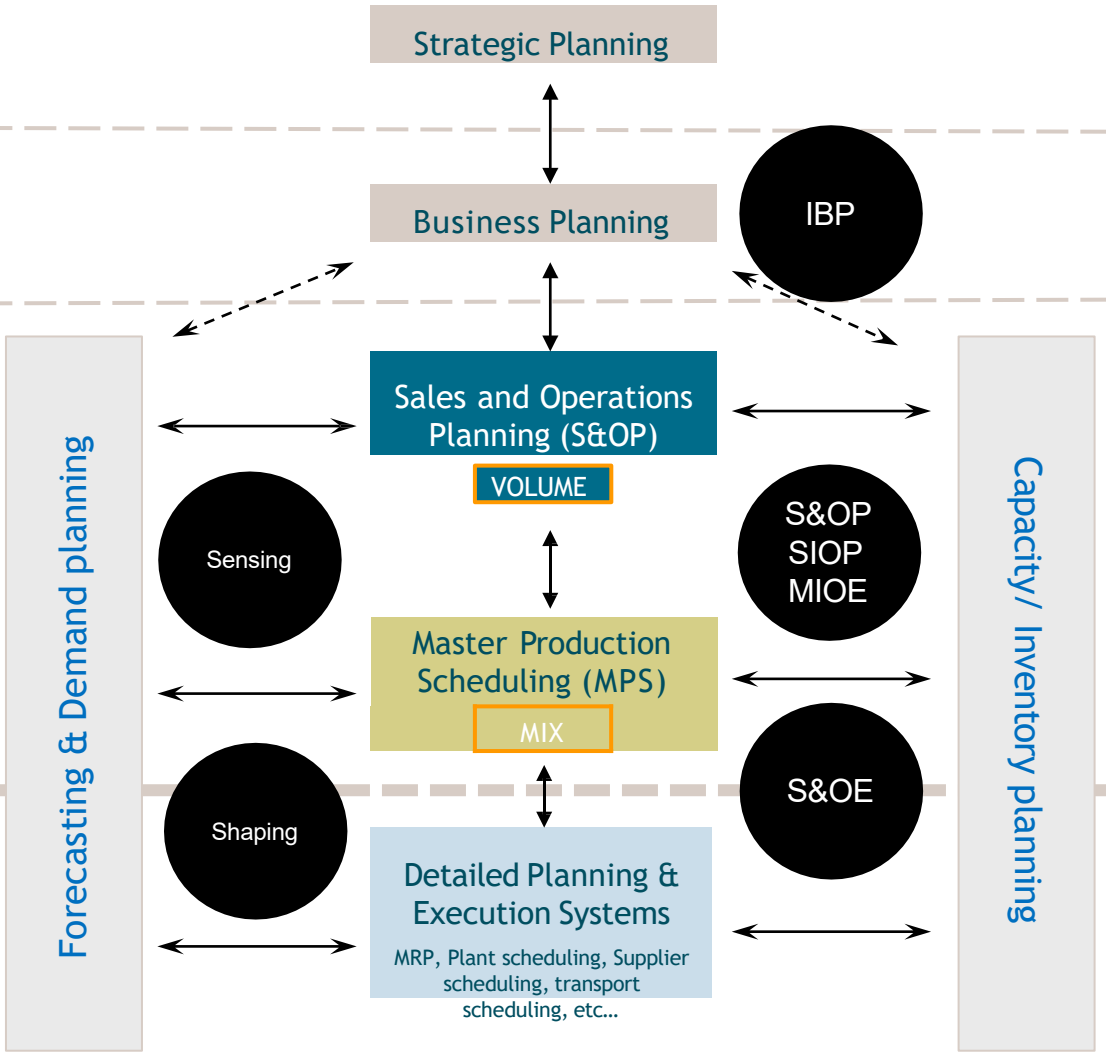
IBP Within the Business Framework

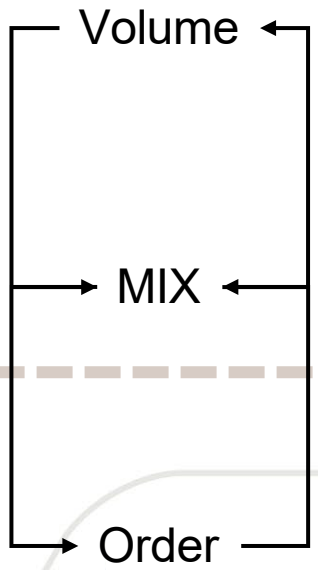
Strategic Planning
-Horizon: 3-10 years
-Buckets: years

Business Planning
-Horizon: 2 years
-Buckets: years

Tactical Planning
-S&OP
-Horizon: 12-18months
-Buckets: months
-MPS
-Horizon: 10 weeks
-Buckets: weeks

Detailed Planning
-Horizon: week/ few days
-Buckets: days/ hours





WHAT IS IBP?

IBP should be cross functional, future focused and collaborative

IBP is ….

- A cross functional business performance management process that is supported by underlying demand forecast and Supply Plan
- Focused on planning beyond the execution window
- Driven by strategic and operational planning needs
- Alignment of operational plans with financial plans
- Transparent process with visibility to underlying facts, assumptions and risk & opportunities
- A decision making process
- Owned by senior leadership
- A BAU (Business As Usual) monthly process

IBP isn't….

- Just about demand and supply balancing to manage operations
- Solving today's latest fire drill or next month's operations
- Driven by daily execution to customer orders
- Creating a separate operational plan to financial plan
- 'Gut feel' driven or hedging process to avoid deviation to Financial Plan
- A reporting process
- A process that should be owned by operational level staff
- A one time event

What LLMs Can Really Do for Supply Chain Today

Key Themes:

LLMs are enablers, not replacements

They **wrap around** existing optimization tools (like SAP IBP, Oracle SCP, Kinaxis).

They translate human questions

("What if demand spikes 15% in the West?") into queries/code that tools can process.

No proprietary data needs to be sent

to public LLMs—secure integrations via API allow separation of model and data.

Use cases working today:

- Explain current plans in plain language
- Run scenario-based "what if" analysis via chat
- Update constraints and trigger re-optimization

Bottom Line: LLMs don't replace supply chain optimization models—they make them faster, easier, and more accessible to business users.

What LLMs Unlock for IBP

LLMs enable:

Faster Decisions

Translate natural language into model-friendly queries without IT dependency

Scenario Planning on Demand

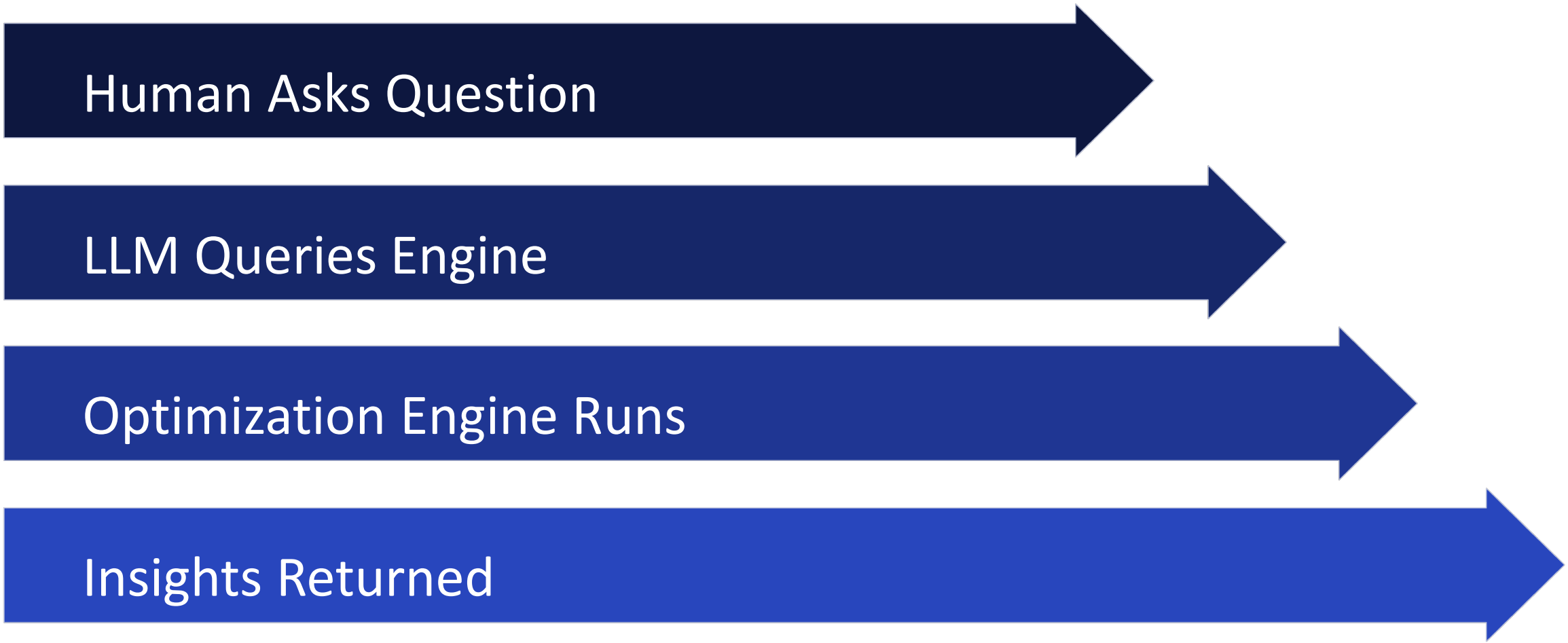
Test shifts in supply, demand, or constraints using conversational interfaces

Data-to-Insight in Minutes

Ask "Why did cost go up?" or "What changed in our plan?" and get contextualized answers

Agile S&OP and Fulfillment

Example: Microsoft reduced demand plan review from a week to minutes



Technology Stack Options for Using LLMs in IBP

1

Enterprise AI Platforms

Example: Palantir AIP – Always-on clean master data pipeline for planning and analytics tools

Use: Enhances ERP integrity and connects real-time, trustworthy data to decision models

2

Embedded Copilots in ERP/CRM Suites

Examples: SAP Joule, Microsoft Copilot, Salesforce Einstein GPT

Use: Native multi-agent systems that coordinate workflows across modules (e.g., sales insights feeding supply planning)

3

Cloud-Native Custom LLM Solutions

Examples: Azure OpenAI, AWS Bedrock, Google Vertex AI

Use: Build bespoke planning copilots and insight agents using secure model APIs with RAG and retrieval capabilities

4

Bolt-On AI Layers for Legacy Systems

Example: IBM Watsonx Code Assistant modernizing COBOL ERP platforms

Use: Inject AI agents or natural language planning interfaces into older environments without full-stack replacement

Where Will We Be a Year From Now?

Key Predictions:

Agent-based planning assistants
will handle multi-step workflows (e.g., demand change → impact analysis → mitigation recommendation)

Embedded AI copilots
will become the norm across major enterprise suites

RAG (Retrieval-Augmented Generation)
will improve relevance and accuracy of planning insights

Data hygiene tools
will gain ground, as LLMs rely on structured and clean data

Custom copilots
will be built faster using pre-trained models and secure internal APIs

Outlook:

- LLMs will mature from "insight tools" to **decision collaborators**.
- The biggest winners will be orgs that combine **data quality**, **trusted optimization engines**, and **LLM interfaces** to enable faster, smarter IBP decisions.

Agents in Supply Chain – Hype vs. Reality

Hype:

> "Autonomous agents will plan, negotiate, and execute tasks without human involvement."
>
> "LLMs will act like planners with judgment and memory."

Reality Check:

- Most current agents are **task-specific scripts** chained together—not truly autonomous
- **LLMs can hallucinate** under ambiguity or poor prompts, requiring strong guardrails
- Agents lack full awareness of enterprise policies, system limitations, or risk thresholds
- Current multi-agent frameworks (LangGraph, CrewAI) are promising but **not enterprise-ready at scale**

Useful Now For:

Task orchestration

(e.g., multi-step plan review and follow-up summary)

Internal copilots

supporting scenario analysis or document generation

Low-risk, high-volume workflows

(e.g., matching quotes to contracts, summarizing forecast changes)

Closing Note: Agents are evolving quickly, but **we're still in the co-pilot era, not autopilot**. Use them to enhance human decisions—not replace them.

When AI + Software = Real Scenario Planning

Component Roles in Modern Scenario Planning:

Packaged Software (Blue Yonder, Kinaxis)

Still the backbone: integrated data, workflows, and governance. Enables control and traceability.

AI Layer (ML/LLM/Optimization)

Adds speed, intelligence, flexibility, and interpretability. It enhances — not enhances — not replaces — existing models.

Cloud & API Infrastructure

Allows AI tools to sit "on top of" or "beside" traditional platforms, reading reading from their models and enriching outputs.

Human-in-the-loop

Planners steer the process and evaluate trade-offs — AI provides fast fast answers and better options to choose from.

Supply Chain AI & Analytics Maturity Ladder – Development Pathways

Maturity Level	Common IBP Business Questions	Development Plan Actions	Applied Learning on a Project
Descriptive	What was our service level last month by customer and SKU? What were our inventory turns by DC?	Learn Excel, ERP systems, and basic KPI tracking; build dashboards	Build monthly KPI dashboard in Excel using real data
Diagnostic	Why did our forecast accuracy drop in Region X? What caused late deliveries last quarter?	Develop SQL and BI tool skills; take root cause analysis training	Conduct root cause analysis of a recent service issue using Power BI
Predictive	What will our demand look like for Q3? Which suppliers are likely to underperform?	Learn time series forecasting, Python or R basics	Create a basic demand forecast model for a product line
Prescriptive	What's the best sourcing plan under Scenario A vs. B? How can we reallocate inventory to minimize cost?	Study optimization models; use scenario planning tools	Design a network optimization scenario for a product allocation issue
Cognitive/Autonomous	Can the system reorder automatically based on real-time signals? How should we reprioritize orders during disruption?	Build AI literacy; work with control towers or digital twins	Pilot an AI-based planning tool or scenario in a sandbox environment
Integrated Enterprise	How do we align operations and finance with real-time data? Can our network simulate scenarios with instant feedback?	Engage in digital transformation projects; learn about enterprise integration	Simulate a digital twin or closed-loop planning scenario across functions

Why new product introduction (NPI) matters now more than ever

Industry trends show increasing reliance on new product revenue across sectors:

Technology & Software

Key Metrics: High NPVI (e.g., B2B target ~30%); Significant Expansion Revenue (NRR >100% ideal for SaaS); AI software market $126B by 2025.

Key Drivers: Rapid innovation cycles; SaaS model (upselling/cross-selling); AI-driven capabilities; cloud adoption.

Pharmaceuticals & Biotechnology

Key Metrics: R&D intensity 27-34%; Major revenue from new drugs needed to offset patent cliffs (e.g., Merck >$50B from new drugs by mid-2030s).

Key Drivers: Patent expirations; scientific breakthroughs; unmet medical needs; high R&D investment.

Automotive

Key Metrics: $1.5T new revenue pool by 2030 from connectivity/mobility; EV sales growth (e.g., GM EV sales +125% in 2024).

Key Drivers: EV transition; autonomous driving; connected car services; servitization (XaaS models).

Consumer Electronics

Key Metrics: High reliance on recently launched products; PCs, audio, TVs >70% of $1.8B US growth in 2025.

Key Drivers: Short product lifecycles; demand for new features (AI, IoT, AR/VR); ecosystem connectivity.

Fast Fashion

Key Metrics: Majority of revenue from very recently launched collections (e.g., 10,000+ new designs/year by some).

Key Drivers: Rapid trend cycles; affordability; e-commerce dominance; social media influence.

Consumer Packaged Goods (CPG)

Key Metrics: Innovative companies 1.8x more likely to grow overall sales; 52% of new items show 2nd-year sales growth.

Key Drivers: Incremental innovation (flavors, packaging); brand refresh; retailer demand for newness; addressing evolving consumer preferences.

Integrated Business Planning and New Product Introduction

New product introduction failures often occur because:

- Customers do not want the product
- Unseen costs or risks
- Strategic mistakes

Not that different from startups…. Most startup management tools involve IBP from the start

IBP's contribution for NPI success

Today we will cover frameworks for two aspects of new product introduction:

Demand planning for new products

Accurately forecasting market adoption and sales

Scaling Operations & Resource Allocation

Ensuring efficient production and distribution

There are many others: metric design, portfolio considerations, pricing, etc

Three Effective Forecasting Methods for NPI

Look-like analysis

Find similar products and see their adoption curves

Expert Opinion

Use the "wisdom of the crowds" to build a forecast

Early demand signals

Crowdsourcing, pilots, pre-orders

Golden Rules: Normalize, Triangulate, Diversify, Build Consensus

Forecasting is a PROCESS that requires structure, iteration, and learning.

Normalize Information

Make everyone look at the same jellybean jar

Triangulate Methods

Use multiple approaches

Build Consensus

Create a deliberated outcome acknowledging ranges, assumptions, and confidence

Diversify Inputs

Involve various functions: Sales, Marketing, Ops, Finance, R&D looking at common information

Andre Calmon

Scaling Supply Chains & Allocating Resources for NPI: How NOT to do it

$80 mm investment by Kleiner-Perkins, CSFB
$500 mm valuation

Specifications:

- 12.5 mph
- 80 lbs
- 11 miles range
- $9000
  (consumer version $4950)

SEGWAY

Original volume projections:
40,000 units/month by end of 2002.

"I would stake my reputation, my money and my time on the fact that 10 years from now, this will be the way many people in many places get around. If all we end up with are a few billion-dollar niche markets, that would be a disappointment. It's not like our goal was just to put the golf-cart industry out of business"
– Dean Kamen

Why Change Leadership Matters in IBP

IBP as Transformation

IBP is not just a technical process—it transforms how strategy is executed. Successful change requires visible leadership, clear communication, and ongoing engagement.

Leadership Requirements

Leaders must sponsor, model, and enforce IBP as the primary decision forum.

Risk of Failure

Without consistent messaging and commitment, change fatigue and skepticism can derail progress.

Leadership Behavior and Cross Functional Alignment are the difference makers

Common Change Management Challenges in IBP Implementations

Cross-Functional Silos and Alignment

IBP by nature cuts across departmental silos, yet organizations often operate in isolation. If IBP is viewed as a "supply chain initiative" rather than a business-wide process, other functions (finance, marketing, sales, etc.) may disengage. Siloed objectives (e.g. sales targets vs. operations capacity) lead to conflict.

Lack of Executive Sponsorship and Leadership Engagement

Strong executive leadership is repeatedly cited as a critical success factor for IBP. When senior leaders are not visibly engaged, IBP initiatives flounder. IBP demands hard decisions (e.g. balancing profit vs. service trade-offs) that cannot be delegated.

Organizational Resistance to Change

Employees may be reluctant to adopt new processes, tools, or decision-making routines, especially if IBP alters their day-to-day work or perceived authority. This human resistance – stemming from uncertainty or fear of change – can slow progress and undermine the IBP rollout.

Data, Definitions, and "One Version of the Truth"

IBP shines a spotlight on data issues and inconsistent business definitions. Companies often struggle with fragmented data and competing metrics – e.g. multiple versions of a forecast, or different definitions of "inventory" or "demand" across functions.

IBP Change Levers

Lever	Description	Example
Incentive realignment	**Align KPIs with IBP goals**	**Sales bonus for forecast accuracy instead of volume**
Narrative reframing	**Create compelling "Why" for IBP**	**"We spend $4M annually firefighting—IBP will reduce this."**
Symbolic **early** wins	**Use quick win to demonstrate value**	**Pilot delivers 5% inventory reduction in 90 days**
Governance enforcement	**Define and enforce decision rights**	**Global plan overrides local in product rationalization**
Peer modeling	**Use internal champions to drive change**	**Successful business units present to laggards**

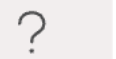
Unique Challenges in IBP Restarts

Credibility and Skepticism

In a restart, stakeholders carry scars from the previous failure. There may be a pervasive "we tried this before and it didn't work" skepticism. Enthusiasm is lower the second time around, and resistance can be more entrenched.

Change Fatigue

If the first implementation dragged on with poor results, people can be fatigued or jaded about the whole process. They might have gone through training and extra meetings previously without seeing benefits.



Residual Process Confusion

A failed IBP attempt often leaves behind partial process understanding or, worse, misunderstandings. The team might have terminology confusion or half-implemented practices that need to be unlearned or clarified.

Rebuilding the Leadership Coalition

Often a restart coincides with leadership changes – maybe a new CEO or VP is sponsoring the revival. Ensuring all leaders are aligned now (especially if some were involved in the prior failure) can be delicate.

Change Management and Communications and Best Practices

Use ongoing, multi-channel communication. Tailor messages by audience and use feedback loops to adjust messaging. Highlight benefits and quick wins to sustain engagement and reinforce change.

Best Practices

- Executive engagement throughout the process
- Structured change models
- Tailored approaches for different stakeholders
- Celebrating quick wins to build momentum
- Assigning dedicated change leaders

Common Pitfalls

- Neglecting awareness building
- Ignoring emotional impact of change
- Allowing silo behaviors to persist
- Lack of progress measurement
- Failing to address change fatigue

Summary and Next Steps

Effective IBP change leadership hinges on managing the people side of transformation.

Use change frameworks and stakeholder mapping.

Plan communications, assign change leads, and celebrate quick wins to reinforce success.

From Insight to Action – Strengthening IBP Practices

Challenge	Actionable Recommendation
IBP maturity varies across teams	Self-assess using an IBP maturity model and plan next-step improvements
Lack of executive sponsorship	Secure a committed executive and tie IBP to business strategy
Siloed planning processes	Map the ecosystem; find quick integration wins in data/process/tools
Finance & Ops misalignment	Run joint scenario sessions to build shared views
Overreliance on the base case	Use structured scenario planning to assess risk and upside
AI is underutilized	Start small and demonstrate value
"We've always done it this way" mindset	Use peer success stories to build urgency and momentum
Poor data quality	Focus on governance of critical inputs—start even if data isn't perfect
Unclear roles in IBP process	Define clear roles and RACI for each step in the cycle
NPI not well integrated	Include NPI milestones in your IBP cadence
Scenario planning is too slow	Build a scenario library and reusable templates
IBP impact on customer value is unclear	Tie outputs to service-level and financial KPIs

From Insight to Action: Your Next 3 Moves in IBP

1. **Assess Your Starting Point**

2. **Pilot a Practical Improvement**

3. **Engage Leadership and Champion Change**

Bottom Line: You don’t need perfection to move forward.

Highlighted Courses

Integrated Business Planning

Custom Course Available. Click the link for more Info.

Machine Learning Applications for Supply Chain Planning

Sept 15, 2025 – Sept 18, 2025 | Virtual (Instructor-led)

Generative AI Application for Supply Chain Professionals

October 6, 2025 - October 8, 2025 | Virtual (Instructor-led) / Georgia Tech Savannah Campus

scl.gatech.edu/course-calendar

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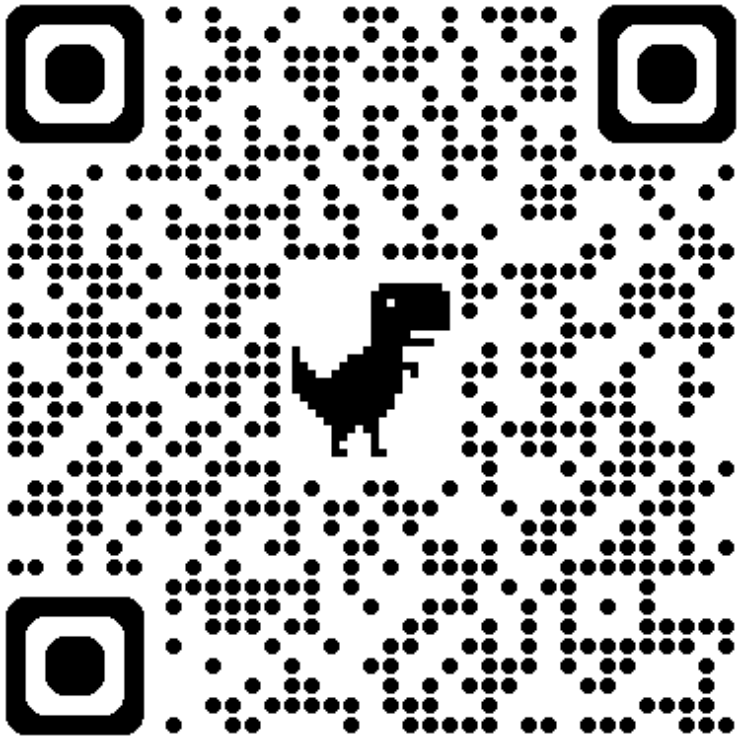
Upcoming Programs at GT Scheller

- **AI for Business:** *September 9-11*
  - AI for Business Course from Scheller College of Business
- **Green Belt:** *October 14,16,21,23*
  - Lean Six Sigma (LSS) Green Belt Online Certification
- **Cyber Security Governance for Board Members:** *October 23-24*
  - Cybersecurity Governance for Board Members



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Upcoming SCL Lunch and Learn Opportunities

Idea to Implementation: How Supply Chain Startups Are Solving Real-World Problems

w/ Alex Rhodeen

Thursday, September 4th | 12-1pm ET | Zoom Registration Link

scl.gatech.edu/sep25-lnl

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WHAT IS INTEGRATED BUSINESS PLANNING?

Integrated Business Planning (IBP) is a decision making process to align business plans, manage performance and integrate key functions within the business. A series of meetings underpin the process, and aim to answer different questions throughout the cycle:

Product Portfolio Management	• Are we bringing any new products to market? • What is the impact on demand / supply of the product portfolio? • Is our current portfolio healthy?
Demand Review	• What do we expect to sell next month, and over the next 3 years? • How do we expect the output of the portfolio review to impact demand? • What are the risks and opportunities? • What is contracted vs. not contracted? • How do we keep perspective on unconstrained demand?
Capacity Review	• What projects and routing exist to expand our production capacity? Have ramp up schedules shifted? • What's changed month over month? Are we hitting our planned speeds? • How much production down time has been planned? And when? • When will these new projects become operational and for which product lines?
Supply Review	• What is the best way to meet the demand from our customers? • Are we at risk of not being able to supply our demand? Do we have under utilized assets? • When do we need to add capacity to realize demand forecasts? • What options do we have to flex our supply levers? • Have we managed to reconcile what we expect to sell vs what we are able to make?
Finance Reconciliation	• What are the financial implications of the chosen demand and supply solution? • What impact do month to month changes have on the business? • How much does the investment cost relative to the revenue gain?
Management Business Review	• Are we aligned to the balanced plan? • If no, opportunity for each Functional Leader to buy-in or resolve misalignment • If yes, acknowledging alignment and hand-off to the business

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Together, these challenges highlight that IBP implementation is primarily a people and process transformation.

The difficulties in IBP/S&OP are "often associated with people" – thus proactive change management is required to reduce resistance and get everyone working toward the common goal.