Using Business Process Analytics to Power Business Decisions

Microsoft 365 & Azure Synapse
Enterprises have adapted dynamically to the challenges posed over the recent years.

- Video calls replaced face-to-face interactions.
- Emails kept processes internally and externally running and bridged process gaps.
- Chats and virtual check-ins substituted casual conversations.
- Collaboration on documents replaced joint working sessions.
Urgent, dynamic, and often decentralized adoption impacted efficiency

- Fragmented processes with gaps between documented and “as-is” processes
- Varied skill levels & widening skill gaps
- Unclear decision processes and communication flows
- Lack of transparency concerning internal and external relationships
- Missed optimization and automation opportunities

“Even brief, 30-day disruptions caused by supply-chain vulnerabilities can result in 3 to 5 percent EBITDA margin gaps.”

McKinsey *(Why now is the time to stress-test your industrial supply chain)*
Data is the currency of the future
Increase the value of your AI models with your unstructured data

Leveraging AI is mainstream

Who's deciding what with AI
- Supply Chain
  - 100.00%: 48%
  - 200.00%: 26%

Seeing the future: Plans to use AI simulations
- Enhance supply chain, operations
  - 100.00%: 54%
  - 200.00%: 33%

Expanding use of holistic data inputs

I. Operations data
- Series 1: [42%, 53%, 64%, 49%, 31%, 45%, 56%, 61%]
- Series 2: [41%, 41%, 43%, 33%, 29%, 29%, 29%, 29%]

II. Financial and sales data
- Series 1: [19%, 20%, 44%, 43%, 40%, 40%, 40%, 40%]
- Series 2: [18%, 18%, 18%, 18%, 18%, 18%, 18%, 18%]

III. Unstructured and External data
- Series 1: [55%, 55%, 55%, 55%, 55%, 55%, 55%, 55%]
- Series 2: [44%, 44%, 44%, 44%, 44%, 44%, 44%, 44%]

Increasing returns

1.8 years
Payback for advanced supply chain investments

Source: PwC, Connected and autonomous supply chain ecosystems 2025
Collaboration and communication activities generate a massive, rich amount of data in M365

- **People**
- **Microsoft Graph**
- **Devices**
- **Files**
- **Events**
- **Chats & channels**
- **Groups**
- **Security**
- **Tasks**
- **Notifications**

Microsoft Graph nodes (emails, users, files, groups and more)

18,000,000,000,000

~300 Million Office365 Users

270 Million Microsoft Teams users
Collaboration and communication activities generate a massive, rich amount of data in M365. The Opportunity: Use M365 data to surface and address the hidden process inefficiencies.
The Opportunity

Use M365 data to surface and address the hidden process inefficiencies

- Uncover and prioritize processes for automation
- Data-driven approach to align key talent on teams/projects
- Improve supply chain design, planning and execution
- Dynamically measure changes with quantified fact base
Business Process Analytics Use Cases

Process Discovery & Automation
Identify process inefficiencies, automate key processes and track performance by measuring variance over time

Skills Finder & Talent Alignment
Locate subject matter expertise to form teams with the right mix of skills and availability

Supply Chain Optimization
Improve supply chain design, planning and execution by unlocking key data residing in collaboration systems that spans stakeholders and value chain
Connect M365 data to Azure Synapse

Continuously collect and store collaboration data in Azure. Combine with other data from LOB systems

Analyze data to discover manual processes and workflow bottlenecks that should be automated or optimized

Build predictive machine learning algorithms to anticipate future issues and opportunities. Deploy in the cloud or the edge

Build new dashboards and apps or augment existing assets to offer views of business process flows and identify potential improvements
M365 Analytics Architecture

**M365 Data Sources**
- Office 365
- Outlook
- Microsoft Teams
- SharePoint

**M365 Metrics**
- People Relationships
- Productivity Score

**Microsoft Graph Data Connect**

**Azure Data Factory Connectors**
- Azure Blob Storage
- Azure Cosmos DB
- Azure Synapse Analytics
- Azure Data Explorer
- Azure Data Lake Storage Gen 1/2

**Azure Data Lake Storage Gen2**

**Power BI**
Extend Existing Business Process Insights

<table>
<thead>
<tr>
<th>Use Cases</th>
<th>Challenge</th>
<th>What you have done</th>
<th>What remains</th>
<th>How we help</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process Discovery &amp; Automation</td>
<td>High process complexity and intensifying pressure to quickly adapt to global economic trends and new circumstances in the hybrid world</td>
<td>Companies have made significant investments to improve business processes by implementing process improvement initiatives/tools</td>
<td>Lack of transparency about the “real” processes as many informal processes are not documented in the system of record</td>
<td>Enable process discovery by pairing M365 data and LOB system data to surface manual processes and bottlenecks for optimization and automation</td>
</tr>
<tr>
<td>Skills Finder &amp; Talent Alignment</td>
<td>Managers are challenged to find employees with right skill sets quickly to fill strategic jobs and optimize fit for role</td>
<td>Skill profiles captured in Human Capital Management apps or LinkedIn are often not up to date nor fully capture the available skill sets</td>
<td>Managers lack transparency about full internal talent pool and often heavily rely on personal network to fill open roles</td>
<td>Enrich employee data from HR systems with M365 data to get insights about skill level and talent pool and staff projects and strategic roles quickly</td>
</tr>
<tr>
<td>Supply Chain Optimization</td>
<td>Reduce cost of forecasting supply/demand, inventory turns, supplier risk and logistics</td>
<td>Best of breed inventory and SCM apps offer visibility to identify and reduce unnecessary costs</td>
<td>Lack of holistic visibility and true cost of doing business as significant coordination happens outside of LOB/SCM systems</td>
<td>Correlate LOB signals and M365 data creating comprehensive view and surface efficiency gains, increase resiliency and build durability</td>
</tr>
</tbody>
</table>
Process Discovery & Automation

Identify process inefficiencies, automate key processes and track performance by measuring variance over time
Today’s Challenges

High process complexity and intensifying pressure to quickly adapt to global economic trends and new circumstances in the hybrid world

Companies have made significant investments to improve business processes, but often lack of transparency about the “real” processes

Employees default to collaboration and communication systems to solve challenges in the process, but these “interventions” are not documented in the system of record
Process Discovery and Automation Solution

Enable **process discovery** by pairing M365 data and LOB system data together in Azure

Leverage Azure Machine Learning models to **understand process flows and identify inefficiencies**

Prioritize processes and automate them using Power Platform

Measure **performance improvement and business impact over time**

**BENEFITS**
- Reduce operational costs and improve efficiencies in business operations
- Reduce complexity and provide transparency about process flows
- Free up personnel and resources to work on higher-value tasks
Customer Story: Process Discovery & Automation

Global real estate broker uses Azure Synapse and M365 Data to discover and automate dynamic market information to increase revenues

**BUSINESS CHALLENGE**

- Customer needed to track characteristics and availability of every piece of commercial real estate
- Real estate is a local market and information is frequently shared between local property managers and reps in the same region
- Listing information is often shared via local email distributions in the form of email bodies, PDF docs, and external website links

**SOLUTION**

- Broker selected Microsoft Graph Data Connect to mine unstructured property listing information from email objects: sender address, metadata, email body, email attachments, and hyperlinks
- Available properties are surfaced, scored, and prioritized through workflows back to local reps for pursuit

**RESULT**

- Solution rollout ongoing
- Customer leadership aims to:
  - Achieve 100% data coverage of available properties in all markets
  - Route new listings to reps for action within minutes
  - Reduce human review and increase prediction accuracy

**SOLUTION ELEMENTS**

- Microsoft Graph Data Connect
- Microsoft 365
- External data & LOB apps
- Azure Synapse
Architecture: Process Discovery & Automation

Data Sources

- Microsoft 365
  - Users
  - Mail Folders
  - Email Messages
  - Calendar Events
- User Configuration
  - Subscribed Users
  - Folder Filters

Extract, Load and Prepare

1. Microsoft Graph Data Connect
2. Azure Storage (raw JSON files)
3. Azure Storage (exploded data)
4. Azure Cosmos DB
5. Azure Storage (filtered data)
6. Synapse Pipeline
7. Initial Load (new users onboarded since last load) + Delta data

Persist

- Lake Database (processed data) (North Europe)
  - Scores
  - Metrics
  - Keywords

Analyze & Visualize

- neo4j
- Power BI
- Other applications
Skills Finder & Talent Alignment

Locate subject matter expertise to form teams with the right mix of skills and availability
Today’s Challenges

Companies are facing high attrition rates and 40% of employees report that they are likely to leave their job within the next 3-6 months.

Leaders cannot fill strategic jobs quickly with the right people.

Managers are not able to tap into the full internal talent pool. Lack of transparency due to organizational siloes and self-reporting of skills.

High reliance on personal network signals need for internal talent marketplace.

Source: How companies can turn the Great Resignation into the Great Attraction | McKinsey – Nov 2021
Skills Finder & Talent Alignment Solution

- **Enrich HR data with M365 to get insights about skill and capability level and talent portfolio**
- **Dynamically identify and surface changes in subject matter expertise based on digital exhaust**
- **Get indication of availability and expertise to staff critical projects and high value positions**
- **Leverage analytics to develop data-driven talent strategy and retain / grow your talent over time**

**BENEFITS**
- Staff critical roles and projects quickly with the right experts to create diverse teams
- Provide job opportunities with great skill fit to boost employee satisfaction and retention
- Gain competitive advantage by developing the right skills and capabilities based on data-driven talent management
Case Study: Skills Finder & Talent Alignment

Award-winning consulting firm uses Azure Synapse and M365 Data to improve team composition & diversity, accelerated staffing and employee engagement.

**BUSINESS CHALLENGE**

- Business leaders, Talent and Learning experts are constantly challenged with building effective & diverse teams
- Complexity is increased by stale skills data (HR systems or LinkedIn) and considering capacity/availability
- Need to modernize and move away from static and outdated employee profiles

**SOLUTION**

- Intelligent application that empowers organizations to align talent with high-value positions and opportunities
- Offers team-building capabilities combined with a skills recommendation engine yielding estimated effectiveness score of the combined team
- Powered by dynamic inferencing of employee skills leveraging M365 data paired with availability inputs

**RESULT**

- 70% reduction in cost associated with time spent finding and aligning employee talent to opportunities
- Increased project success rates through team effectiveness and diversity by 20% +
- Improved employee satisfaction through role and project alignment based upon skills and interests
- Built better, more productive teams by grouping people with complementary strengths together

**SOLUTION ELEMENTS**

- Microsoft Graph Data Connect
- Microsoft 365
- External data & LOB apps
- Azure Synapse
Case Study: Skills Finder & Talent Alignment

Big Four Accounting Firm leverages M365 + MGDC + Azure Synapse to improve new agent onboarding

**BUSINESS CHALLENGE**

- The time to onboard a new analyst until they are supporting customers on average was 6-9 months
- Analysts had not developed their networks and were unable to find experts to assist them
- Who knows what / who knows who was non-existent

**SOLUTION**

- The Project Staffing application is a Microsoft Graph Data Connect based solution which allows engagement managers to build the best suited teams for projects. Find employees that are available and have the best set of skills for the project, as well as the most relevant set of potential skills
- The application ingests data from Microsoft Graph Data Connect and complementary data sources using Azure Data Factory (ADF) pipelines and uses this to build a model based on which the most relevant employees are recommended
- [Link to Solution Accelerator]

**RESULT**

- Agent onboarding time dropped dramatically from nine months to three months
- Networks developed quicker
- Customer output completed faster leveraging past artifacts

**SOLUTION ELEMENTS**

- Microsoft Graph Data Connect
- Microsoft 365
- External data & LOB apps
- Azure Synapse
Expertise Finder Solution Accelerator

Empower organizations to align talent to high-value positions and opportunities. Move away from static, and often outdated, employee profiles to a dynamic organizational search experience that is fed with the unique and rich data provided by Microsoft’s Graph Data Connect.

**FUNCTIONALITY**
- Search by skills + inferring possible skills
- Search by name
- Filtering by different criteria (location, department, state)
- Sorting by relevance or availability

**IMPACT**
- 70% reduction in cost associated with time spent finding and aligning employee talent to opportunities
- Increase project success rates through team diversity
- Improve employee satisfaction through role and project alignment based upon skills and interests

**Sample use cases:** Enterprise project teams | Cross-functional business processes initiatives | Technology & consultancy firms/internal projects

**Download Accelerator**
Supply Chain Optimization

Locate subject matter expertise to form teams with the right mix of skills and availability
Today’s Challenges

- Sustainable and diversified access to materials to mitigate geopolitical risk
- Margin pressures due to escalating transportation costs
- Acquiring comprehensive view into holistic supply chain
- Need to automate lower-level decision making (leveraging AI)
Supply Chain Optimization Solution

Fuel optimization by pairing M365 data & LOB system data in Azure

Leverage Azure Machine Learning models to surface hidden costs and gain efficiencies

Visualize comprehensive supply chain using PowerBI

Measure improvement and business impact over time

BENEFITS

- Decrease costs: 2x costs reduction using digital & Lean – compared to using Lean alone
- Comprehensive view into supply chain highlights highest return potential
- Surface hidden costs in supply chain that are often overlooked

1 Bain & Company
Partner Story: Supply Chain Optimization

F500 Manufacturer uses Partner solution, Azure Synapse and M365 Data for ongoing improvements in Supply Chain efficiencies leveraging AI models

**BUSINESS CHALLENGE**

- Order delivery is inherently complex and needs orchestration around many components in the supply chain
- Order block remediation requires coordination across multiple business functions and customer

**SOLUTION**

- AI models help optimize coordination costs, creating a major efficiency uptick in order management performance

**RESULT**

- Decreased costs
- Increased customer satisfaction
- Significantly advanced AI models trained on M365 data at scale for broader business application

**SOLUTION ELEMENTS**

- Microsoft Graph Data Connect
- Microsoft 365
- External data & LOB apps
- Azure Synapse
Next steps ...

- Learn more about how to ingest M365 data in Azure Synapse ([Link](#))
- Align with your business stakeholders for sponsorship, expectations and budget
- Start with business case to develop scenario/use case and supporting solution design

...how Microsoft can help you

- Request MTC Data & AI Architecture Design Session or Rapid Prototype (optional)
- Work with your DAI CSA to do a pilot/Solution Accelerator (optional)
Architecture Overview: Supply Chain Optimization

1. Digital Marketing
2. Big Data Analytics
3. Sales & Customer Relationship
4. OEM Cloud Services
5. Retailers
6. Consumers
7. Consumers
8. Enable home users
9. Consumer Experience
10. Update, optimize, manage Consumer Devices
11. Machine learning
12. Design & Engineering
13. Design & Partners
14. Suppliers & Partners
15. Monitor, Analyze and Store Consumer Devices
16. New service capabilities
17. Resource optimization
18. Service & CAC