

CI+AI. The New Formula Leveraging AI to Continuous Improvement

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This conference is presented in partnership with University of Cincinnati.

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Professional Experience

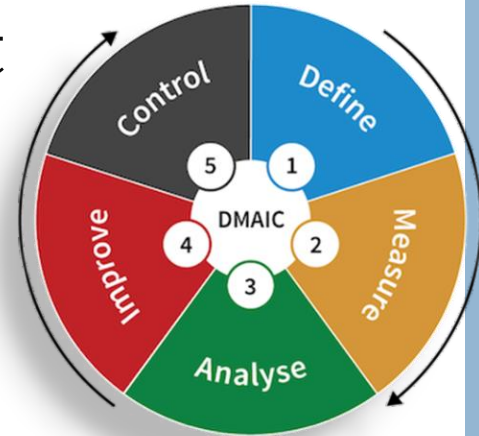
- Managing Principal – A-S Consulting
- Asst. Professor Operations Mgmt
- Sr. Dir. of Performance Improvement at Convergys
- Sr. Improvement Mgr. (APAC & LATAM) at AtoS International
- Global Dir. of CI at Siemens IT S&S
- Global Prog. Exec. & LSSBB at Xerox

Professional Education

- B.A. in Communications, The Univ. of Cincinnati
- Executive MBA from Xavier University
- International Business at Sophia University in Tokyo
- *Lean Management from Mckinsey*
- Systems Thinking, Society for Organizational Learning

Agenda: How can AI be leveraged to improve CI?

- Project Portfolio Development
- Define: Project Charter Development
- Measure: Data Analysis and Charting
- Analyze: Root Cause Identification
- Improve: Improvement Plans
- Control: Control Triggers and Response Plans



Project Portfolio Development

- CVG 10k review
- Prompts
 - Review the attached 10k to identify 6 project opportunities to improve financial performance and customer satisfaction
 - Quantify the potential impact for each
 - Quantify each in dollars based on the 10k

UNITED STATES
 SECURITIES AND EXCHANGE COMMISSION
 Washington, D.C. 20549

FORM 10-K

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
 SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2017
 Commission file number 1-14379

CONVERGY'S CORPORATION

An Ohio Corporation I.R.S. Employer
 201 East Fourth Street, Cincinnati, Ohio 45202 No. 31-1598292
 Telephone Number (513) 723-7000

Securities registered pursuant to Section 12(b) of the Act:

| Title of each class | Name of each exchange on which registered |
|------------------------------|---|
| Common Shares (no par value) | New York Stock Exchange |

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (Section 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (Section 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The aggregate market value of the voting shares held by non-affiliates of the registrant was \$2,218,200,540 , computed by reference to the closing sale price of the stock on the New York Stock Exchange on June 30, 2017 , the last business day of the registrant's most recently completed second fiscal quarter.

At January 31, 2018 , there were 91,618,405 common shares outstanding, excluding amounts held in treasury of 870,800 .

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement for the Annual Meeting of Shareholders to be held on April 25, 2018 are incorporated by reference into Part III of this report.

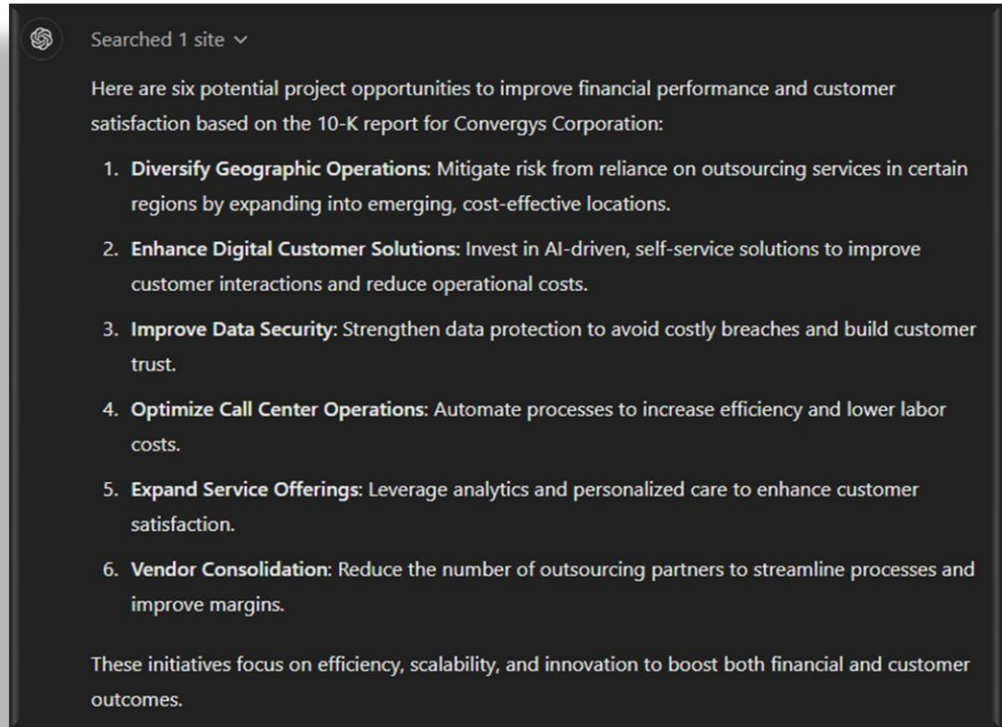


Microsoft Edge
PDF Document



Project Portfolio Development

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Searched 1 site ▾

Here are six potential project opportunities to improve financial performance and customer satisfaction based on the 10-K report for Convergys Corporation:

1. **Diversify Geographic Operations:** Mitigate risk from reliance on outsourcing services in certain regions by expanding into emerging, cost-effective locations.
2. **Enhance Digital Customer Solutions:** Invest in AI-driven, self-service solutions to improve customer interactions and reduce operational costs.
3. **Improve Data Security:** Strengthen data protection to avoid costly breaches and build customer trust.
4. **Optimize Call Center Operations:** Automate processes to increase efficiency and lower labor costs.
5. **Expand Service Offerings:** Leverage analytics and personalized care to enhance customer satisfaction.
6. **Vendor Consolidation:** Reduce the number of outsourcing partners to streamline processes and improve margins.

These initiatives focus on efficiency, scalability, and innovation to boost both financial and customer outcomes.

Project Portfolio Development

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quantify the potential impact for each



Here is a quantified analysis of the potential impact of the six project opportunities:

1. **Diversify Geographic Operations:** Expanding into emerging markets could reduce labor costs by 15-20%, potentially improving profit margins by 5-8% annually.
2. **Enhance Digital Customer Solutions:** Automating customer service could reduce operating expenses by 10-15%, while increasing customer satisfaction by 20-25% due to faster response times.
3. **Improve Data Security:** Strengthening cybersecurity could reduce the risk of breaches by 40-60%, preventing potential legal and reputational losses amounting to \$10-50 million annually.
4. **Optimize Call Center Operations:** Automating workflows and reducing manual tasks could cut labor costs by 10-12%, potentially increasing efficiency by 15%.
5. **Expand Service Offerings:** Offering personalized care and analytics could increase revenue by 5-10%, improving customer retention by 15-20%.
6. **Vendor Consolidation:** Reducing vendor complexity could lower outsourcing costs by 10-15%, improving operational margins by up to 3%.

These estimates will vary depending on the scale of implementation, market conditions, and company capacity to adapt new initiatives.

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Quantify each in dollars based on the 10k



To quantify each opportunity in dollars, we'll need to base calculations on specific figures from Convergys' 10-K. Here are the estimates:

1. **Diversify Geographic Operations:** Convergys had \$2.79 billion in revenue in 2017. Labor cost reduction of 15-20% in certain regions could save approximately \$50-70 million annually.
2. **Enhance Digital Customer Solutions:** Reducing operating expenses by 10-15% on a cost base of approximately \$2.4 billion could save \$240-360 million, while improving customer satisfaction could boost revenue by \$100-200 million.
3. **Improve Data Security:** Preventing data breaches could save \$10-50 million annually based on industry breach cost averages.
4. **Optimize Call Center Operations:** Cutting labor costs by 10-12% could yield \$100-120 million in savings on annual labor expenses.
5. **Expand Service Offerings:** Increasing revenue by 5-10% could translate to an additional \$140-280 million annually.
6. **Vendor Consolidation:** Reducing vendor complexity could save \$20-30 million by improving margins by 3% on certain contracts.

These values depend on execution scale and operational efficiency improvements within Convergys' financial model.

Define: Project Charter Prompt

- Project idea 4

4. **Optimize Call Center Operations:** Cutting labor costs by 10-12% could yield \$100-120 million in savings on annual labor expenses.

Prompt: write a project charter for this project idea, "*Optimize Call Center Operations: Cutting labor costs by 10-12% could yield \$100-120 million in savings on annual labor expenses*". The project charter should cover the following based on the 10K data: *Problem Statement, Business Opportunity, project Scope, timeline with 5 phases of Define, Measure, Analyze, improve and Control, Project goal*"

Define: Project Charter Development

• Project charter

Project Charter: Optimize Call Center Operations

Problem Statement
Convergys' current call center operations involve high labor costs, reducing profitability and operational efficiency. There is a need to optimize these operations to remain competitive and improve financial performance.

Business Opportunity
By cutting labor costs by 10-12%, Convergys could achieve \$100-120 million in annual savings. This presents a significant opportunity to enhance operational efficiency while maintaining service quality.

Project Scope
The project will focus on streamlining call center operations by implementing automation technologies, optimizing workforce management, and enhancing training programs. The scope includes all call centers across global operations.

Timeline & Phases

- 1. Define (Month 1)**
 - Identify key inefficiencies in labor utilization and processes.
 - Establish baseline metrics for call center performance (labor costs, call resolution time, customer satisfaction).
- 2. Measure (Month 2-3)**
 - Collect data on current workforce distribution, task completion rates, and operational workflows.
 - Assess current labor costs against service outputs (calls handled, service quality, customer satisfaction).
- 3. Analyze (Month 4-5)**
 - Analyze collected data to identify major cost drivers.
 - Evaluate potential automation solutions, process optimizations, and workforce management tools to reduce inefficiencies.
- 4. Improve (Month 6-8)**
 - Implement automated solutions (e.g., chatbots, AI-driven call routing) and optimize scheduling.
 - Enhance staff training programs to improve first-call resolution and reduce call handling time.
- 5. Control (Month 9-10)**
 - Monitor labor cost reduction and efficiency improvements.
 - Establish KPIs for sustained cost control, with regular audits of workforce management and technology performance.

Project Goal
Achieve a 10-12% reduction in annual labor costs, translating to \$100-120 million in savings, while maintaining or improving customer satisfaction and service quality.

Measure Prompt:

Analyze the attached file for areas of inefficiency or high levels of defects



Based on the data analysis:

1. SLA (Service Level Agreement) Compliance:

- **SLA Met:** 9,583 cases (87.6% of total cases) met the SLA.
- **SLA Not Met:** 1,352 cases (12.4%) failed to meet the SLA, indicating an area of inefficiency.

2. KPI Breach:

- **Less than 12 Hours:** 9,641 cases were resolved within 12 hours.
- **Greater than 12 Hours:** 1,161 cases exceeded the 12-hour threshold, indicating potential inefficiency in handling time.

Areas of Inefficiency or High Defect Levels:

- **12.4% SLA breaches** suggest a significant portion of cases did not meet service expectations, which could directly affect customer satisfaction.
- **1,161 cases breaching the 12-hour KPI** represent a delay in resolution times, pointing to operational bottlenecks, particularly in cases with complex issues or resource limitations.

Focusing on reducing the number of cases breaching the SLA and improving response times for those exceeding 12 hours would enhance both operational efficiency and customer satisfaction. [-]



Microsoft Excel
Worksheet

Analyze Prompt:



Based on the data from the attached file and the analysis of SLA and KPI breaches, several potential root causes for missed SLA and KPI breaches can be identified:



Here is a breakdown of the potential root causes for missed SLA and KPI breaches, along with the quantified volume of each defect based on the "Pareto Review" categories in the dataset:

1. Tech Availability

- **Volume:** 551 cases
- **Root Cause:** Delays due to unavailability of technicians, leading to missed SLAs and extended resolution times.

2. Coded Incorrectly (Multiple Categories)

- **Volume:** 386 cases (Coded Incorrectly-CD: 177, EUD: 92, VD: 81, Finish Code: 36)
- **Root Cause:** Incorrect coding of issues, resulting in improper allocation of resources, delays in diagnosis, or incorrect actions taken, leading to SLA and KPI breaches.

3. Parts Availability (Multiple Categories)

- **Volume:** 348 cases (LANPrinter: 126, Other Standard: 107, HDD: 85, MICR: 27, SysBrd: 27, Delivery Issue: 3)
- **Root Cause:** Delays due to unavailability or incorrect parts, causing longer repair times and missed SLA targets.

4. Reopened Cases (Same or Different Issues)

- **Volume:** 87 cases (Same issue: 60, Different issue: 23, Admin: 4)
- **Root Cause:** Cases that were reopened due to unresolved or recurring issues, resulting in rework and extended resolution times, contributing to missed SLAs and KPIs.



Improve Prompt:



To improve tech availability and reduce the number of defects (551 cases related to tech availability), here are several strategies, along with an estimate of the reduction in defects for each improvement:

1. Implement Predictive Scheduling and Dynamic Workforce Allocation

- **Description:** Use predictive analytics to forecast peak demand periods and dynamically adjust the workforce to ensure that enough technicians are available. This approach would ensure that technicians are better distributed to match workload fluctuations across regions and time periods.
- **Potential Defect Reduction:** This could address around 30-40% of the tech availability issues by ensuring optimal technician distribution, potentially reducing defects by 165-220 cases.

2. Cross-Training Technicians

- **Description:** Train technicians to handle multiple types of tasks or cases, so they can cover for each other during peak times or when specialized technicians are unavailable. Cross-training improves flexibility and reduces downtime when certain expertise is lacking.
- **Potential Defect Reduction:** Cross-training could reduce availability-related defects by 20-25% by providing more flexibility in resource allocation, reducing defects by around 110-140 cases.

3. Increase Remote Support Capabilities

- **Description:** Increase the use of remote diagnostics and virtual assistance tools (e.g., video calls, augmented reality-based support) to allow technicians to handle more cases without needing to be physically present.
- **Potential Defect Reduction:** Implementing remote support could handle 15-20% of tech availability issues, reducing defects by 80-110 cases.

4. Implement an On-Demand Technician Pool (Gig Workforce)

- **Description:** Develop an on-demand pool of part-time or gig-based technicians who can be called upon during high-demand periods. This flexible workforce could be dispatched quickly to meet sudden spikes in demand or when full-time technicians are unavailable.
- **Potential Defect Reduction:** This strategy could reduce tech availability-related defects by 10-15%, potentially preventing 55-80 cases of missed SLAs due to technician shortages.

5. Optimize Technician Routing and Travel Time

- **Description:** Use route optimization software to reduce travel times between job sites for field technicians. This would allow technicians to handle more cases within the same time frame and reduce idle periods.
- **Potential Defect Reduction:** Reducing travel time could address 10-12% of tech availability issues, reducing defects by 55-65 cases.

Control Prompt:

Assuming the aforementioned improvements are implemented, construct a control plan that define the action thresholds to keep the performance above 90%. Detail actions that should be taken if thresholds are breached.

Control Plan for Maintaining Tech Availability Above 90%

Goal:

To maintain tech availability performance above 90% by monitoring key metrics, establishing action thresholds, and implementing corrective actions when necessary.

1. Key Metrics to Monitor:

- **Tech Availability Rate:** The percentage of time technicians are available to handle service requests.
- **Average Response Time:** The time between when a technician is requested and when they start working on the issue.
- **Case Resolution Time:** Time taken to resolve a customer case.
- **Missed SLAs Due to Tech Availability:** Number of missed SLAs attributable to tech availability issues.
- **Technician Utilization Rate:** Percentage of time technicians are actively working versus idle.

2. Action Thresholds:

To ensure tech availability performance stays above 90%, the following action thresholds will be implemented:

| Metric | Threshold Level | Control Action |
|---------------------------------|-------------------------------|--|
| Tech Availability Rate | < 90% (weekly) | Immediate review of workforce allocation, redistribute technicians. |
| Average Response Time | > 10% above target (weekly) | Analyze bottlenecks in dispatching and routing, optimize routing or scheduling. |
| Case Resolution Time | > 10% above target (monthly) | Investigate case complexities, adjust technician skills and cross-training schedules. |
| Missed SLAs Due to Availability | > 5% of total cases (monthly) | Conduct root cause analysis, reallocate resources or escalate for additional support. |
| Technician Utilization Rate | > 80% (monthly) | Increase workforce (full-time or gig technicians), optimize scheduling to avoid burnout. |

Control Prompt:

Assuming the aforementioned improvements are implemented, construct a control plan that define the action thresholds to keep the performance above 90%. Detail actions that should be taken if thresholds are breached.

3. Control Actions When Thresholds Are Breached:

A. Immediate Actions (Threshold Breached for 1 Week)

1. Tech Availability Rate < 90%

- **Action:** Conduct an immediate review of current technician schedules and redistribute workload. Increase technician availability by calling in the on-demand technician pool or redistributing cases across regions to balance the load.
- **Responsibility:** Dispatch Manager, Workforce Planning Team
- **Time Frame:** Immediate within 24-48 hours.

2. Average Response Time Exceeds Target by > 10%

- **Action:** Optimize technician dispatching processes, including rerouting technicians for faster response. Investigate delays in response due to travel time or communication gaps and implement route optimization tools or real-time coordination improvements.
- **Responsibility:** Operations Manager, Dispatch Team
- **Time Frame:** Immediate changes within 24 hours, full analysis within 1 week.

B. Secondary Actions (Threshold Breached for 2 Consecutive Weeks)

1. Tech Availability Rate < 90% for 2 Weeks

- **Action:** Analyze staffing levels and review predictive scheduling models. Implement temporary workforce increases using part-time or gig-based technicians. Initiate technician cross-training sessions to broaden the capabilities of available staff.
- **Responsibility:** Operations Director, Workforce Planning, HR
- **Time Frame:** 1-2 weeks.

2. Average Response Time Consistently Exceeds Target

- **Action:** Perform a detailed review of technician routing, identify inefficiencies, and optimize travel times. Consider redistributing service areas to minimize travel. If remote support tools are not sufficiently utilized, increase technician reliance on remote troubleshooting to reduce response times.
- **Responsibility:** Service Delivery Manager, IT Support
- **Time Frame:** Full optimization implemented within 2 weeks.

C. Escalation Actions (Threshold Breached for 4 Consecutive Weeks)

1. Tech Availability Rate Consistently < 90% for 1 Month

- **Action:** Escalate to senior leadership for strategic workforce planning. If necessary, increase permanent staff or renegotiate with contract/gig technicians. Implement automated workforce management tools for real-time resource reallocation.
- **Responsibility:** Senior Operations Leadership, HR, and Finance
- **Time Frame:** Strategic decision within 4 weeks, execution within 6-8 weeks.

Control Prompt:

Assuming the aforementioned improvements are implemented, construct a control plan that define the action thresholds to keep the performance above 90%. Detail actions that should be taken if thresholds are breached.

4. Continuous Monitoring and Reporting:

- **Daily:** Monitor tech availability rate and average response time for real-time adjustments.
- **Weekly:** Review technician utilization rate and missed SLAs to identify trends or recurring issues.
- **Monthly:** Conduct a comprehensive performance review, including root cause analysis of recurring breaches, and track progress on improvement initiatives.

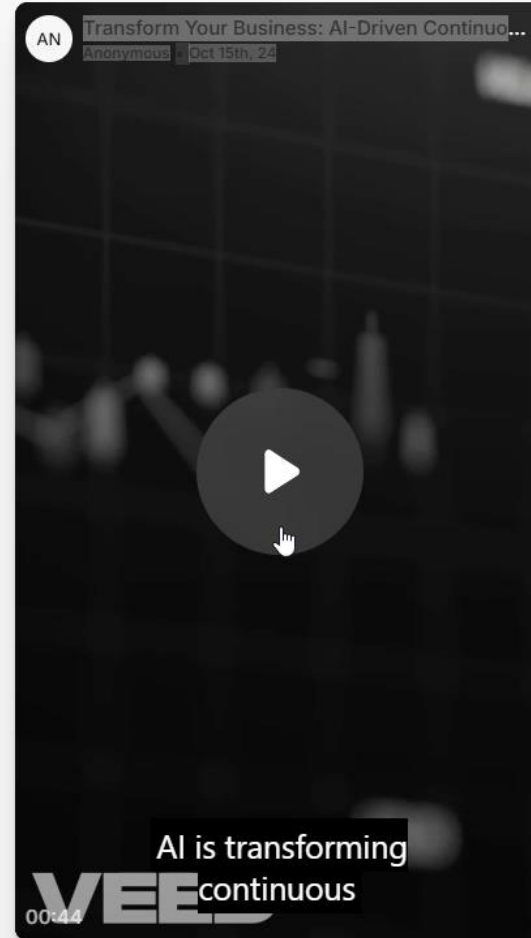
5. Proactive Measures to Prevent Threshold Breaches:

- **Automated Alerts:** Set up automated monitoring tools that trigger alerts when any of the thresholds are breached, ensuring immediate response.
- **Routine Technician Feedback:** Regularly collect feedback from technicians regarding workload, challenges, and support needs to make proactive adjustments.
- **Quarterly Workforce Reviews:** Conduct quarterly reviews of workforce capacity versus demand forecasts to ensure sufficient resources are always available.

By implementing this control plan, Convergys can ensure that tech availability consistently stays above 90%, while minimizing SLA breaches and maintaining high levels of customer satisfaction.

Summation

- AI cannot currently replace institutional knowledge and experience however; it can greatly expedite an analysis.
- AI used by experienced professionals can see a 20x time reduction in strategic and tactical project improvement activities.



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