



Business Transformation & Operational Excellence Awards **Best Achievement of Operational Excellence in Manufacturing**

Applicant: Enterprise Process Excellence, Intel Corporation

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Executive Summary:

Enterprise Process Excellence (PEX), is an international team of senior-level process improvement practitioners that function as internal consultants and as owners of the Lean Six Sigma (LSS) training and certification program at Intel Corporation. Over the past 12 years of the team's existence, PEX has consistently delivered millions of dollars every year in revenue growth and cost savings through productivity, efficiency, quality, and process improvements across the business.

PEX team members drive and support process and operational excellence as internal LSS consultants across the company. The team's consulting partnerships span a large number of diverse functional areas across the Intel enterprise that are strongly aligned to corporate strategic objectives. The PEX team has achieved significant business value for their consulting customers, averaging 5 – 10x ROI per engagement, and the team has received an outstanding number of highly-regarded internal awards from their customers and impacted business units in recognition of these results.

The PEX team is also responsible for Intel's LSS Center of Excellence, which governs, trains, mentors, and champions LSS across the company. The PEX LSS Center of Excellence has trained and certified thousands of the Intel employees. All PEX LSS certifications require completion of a DMAIC based certification project that is strongly aligned to the strategic objectives of the candidate's functional area and that delivers financed-approved business value to Intel. The total combined ROI of PEX LSS certification projects has delivered over \$1B business value to Intel over the 12-year lifetime of the program.

Our Strategic Objectives and The Scope of Our Deployment:

Our mission is to be the internal go-to partner across the Intel enterprise to achieve efficiency and effectiveness improvements through the use of industry-proven process and operational excellence tools and methodologies. We deliver on this mission through our two primary services: directly partnering with the business with internal consulting partnerships and leading the enterprise LSS Community of Excellence.

Short term strategy (1-2 years):

- Continue to strengthen partnerships and find new opportunities that align to Intel's "four big bets" (autonomous driving, virtual reality, 5G, and AI) and the "Virtuous Cycles of Growth" data-centric, digital transformation corporate strategies.



- Continue to enhance our team's project management and change management skills to improve the execution and accelerated adoption of our continuous improvement efforts. Our 2020 goal is for the team to be 100% PM and TCM externally certified as well as develop additional internal tools and best practices on how to integrate these practices into our existing LSS toolset.
- Improve our ability to scale more efficiently and modernize our LSS training and certification program. Our 2020 goal is to offer additional web-based training, transition to a subscription fee-based model, and update our training material and supporting tools

Long term strategy (3-5 years):

- Integrate and leverage new, emerging technologies with our existing LSS, PM, and TCM toolset by adopting such methods and tools as RPA, BPM automation, process mining, machine learning, etc. to offer new and enhanced services to our consulting and LSS Community of Excellence customers.
- Seek out and discover new synergies to between our consulting partnerships and LSS Community of Practice to improve both services for our customers
- Become the partner of choice across all Intel business units and actively partner, supplement, and compete with Intel's tier one external consulting suppliers for our core LSS, PM, and TCM services.

Our Implementation and Deployment Timeline:

- 2004 – 2006: The Materials Group in the Technology Manufacturing business unit completes external LSS training from GE to begin its own internal quality program. The program eventually becomes so successful that the team begins receiving LSS project support requests from external business units.
- 2006: Intel hires GE and Motorola LSS expert practitioners and several team members from the Material Group complete external MBB certification to launch a new enterprise-wide LSS deployment within the IT business unit: Enterprise Process Excellence (PEX)
- 2006 – 2014: PEX delivers Lean, Six Sigma, BPM, Sift, and Kaizen training and certification, as well as informal adhoc continuous improvement and quality project support, across the company. The PEX LSS Community of Excellence training and certification program quickly scales and delivers thousands of continuous improvement projects that generate millions of dollars in financed approved ROI during this period of growth.
- 2014-2015: PEX is reorganized under IT's UX portfolio and begins formal, strategic project/program LSS assignments with more internal focus on IT. The PEX LSS program matures and continues to deliver consistent annual business value and number of LSS certified employees across the company.



- 2016-2018: PEx transitions to IT's Professional and Technical Services and launches pay-per-view, internal consulting services with renewed focus on delivering value to the larger Intel enterprise and better alignment to overall corporate objectives. PEx team members partner across almost every major business unit and corporate strategic program under this new model. PEx team members generate 5 – 10x business value for its customers and the majority of team members have received highly regarded Intel recognitions and awards from impacted business units. The LSS program continues to deliver on its ROI and certification KPIs as the team continues to improve efficiencies and modernize content.

The Size of Our Deployment Challenge:

- Our deployment is corporate-wide, supporting 100,000+ employees in over 58 countries worldwide.
- Our team has partnered with almost all functional areas of the Intel enterprise including manufacturing, product development, R&D, supply chain, HR, finance, sales, marketing, legal, customer support, and IT.
- Our team has always sought out voluntary partners with the business. We view our LSS deployment as a “middle-out” program. We have cultivated a front line employee volunteer army, middle-senior level management partnerships, and enterprise status and recognition from senior executives for our deployment but we do not have a traditional “top-down” LSS mandated, push deployment. We believe our continued business results and team longevity validates that our “middle-out” approach is a sustainable, flexible, and customer-oriented deployment model.

The Impact of Our LSS Community of Excellence Deployment:

- Our team has delivered LSS, BPM, and Kaizen training, mentoring, and certification to thousands of Intel employees. Our LSS Community of Excellence currently has approximately 1800 green belt, 130 black belt, and 15 master black belt PEx certified Intel employees.
- In addition to the several thousand certification and non-certification projects recorded in our LSS Community of Excellence project tracking tool, we conservatively estimate our team's efforts have directly contributed to and enabled the completion of 3,500 process and operational excellence continuous improvement projects across the Intel enterprise over the life time of the program.
- The PEx LSS Community of Excellence also serves a cross-silo best-known-methods and lessons-learned sharing platform for employees across the enterprise.

The Results of Our Deployment



- PEx has consistently delivered at least \$100M+ in finance-approved ROI every year for the past 12 years of the program
- PEx team has trained and certified ~2000 LSS Intel employees over the past 12 years.
- Delivered 5 – 10x ROI for our internal consulting service partners.
- PEx has won the following highly-regarded internal awards from our customers in 2017/2018:
 - 5 Division Recognition Awards granted by the Technology Manufacturing Group (2), the Internet of Things Group (1), and the Information Technology Group (2) in recognition of PEx consulting services.
 - 1 Outstanding Achievement Award granted by the Data Center Group in recognition of PEx consulting services.
 - 4 Superior Achievement Awards granted by the New Technology Group (1), the Sales and Marketing Group (1), and the Information Technology Group (2) in recognition of PEx consulting services.
 - 2 Significant Achievement Awards granted by the Data Center Group and the Client Computing Group in recognition of PEx consulting services.
 - Multiple Excellent and Notable Achievement Awards primarily from employees in the LSS Community of Excellence for PEx LSS mentoring and certification services.
- And most importantly, direct evidence on how we are delighting our customers by a small sampling of what they are saying about us (customer survey responses):
 - *“If you want to move faster, this is the team to help you.” ~ Datacenter Engineering Group Director*
 - *“THANK YOU so much for driving our project from beginning to end. Your attention to detail and holding the team’s feet to the fire on deliverables and success criteria was critical. We couldn’t have done this without you!!!” ~ New Technology Group Risk & Controls Director*
 - *“Our PEx Change Manager was skilled, proficient, had a positive attitude, and was a pleasure to work with” ~ IT Service Owner*
 - *“The PEx Lean Six Sigma training has been an amazing eye-opening experience that has instilled in me the principles and practical tools to look at professional and personal processes in a clear and structured format which has allowed me to quickly and effectively improve and get better results in both realms.” ~ PEx Lean Six Sigma Black Belt Candidate from the Technology Manufacturing Group*