Intel's Journey to Large Scale DevOps Transformation

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About Me

Sherry Chang

Biography

- Chief Architect, DevOps & Continuous Delivery
  - Working at Intel IT
- 20+ Years in Software Development
- ITIL V2 Certified
- Certified Scrum Master
- BBA, Management Information Systems
  - University of Texas at Austin

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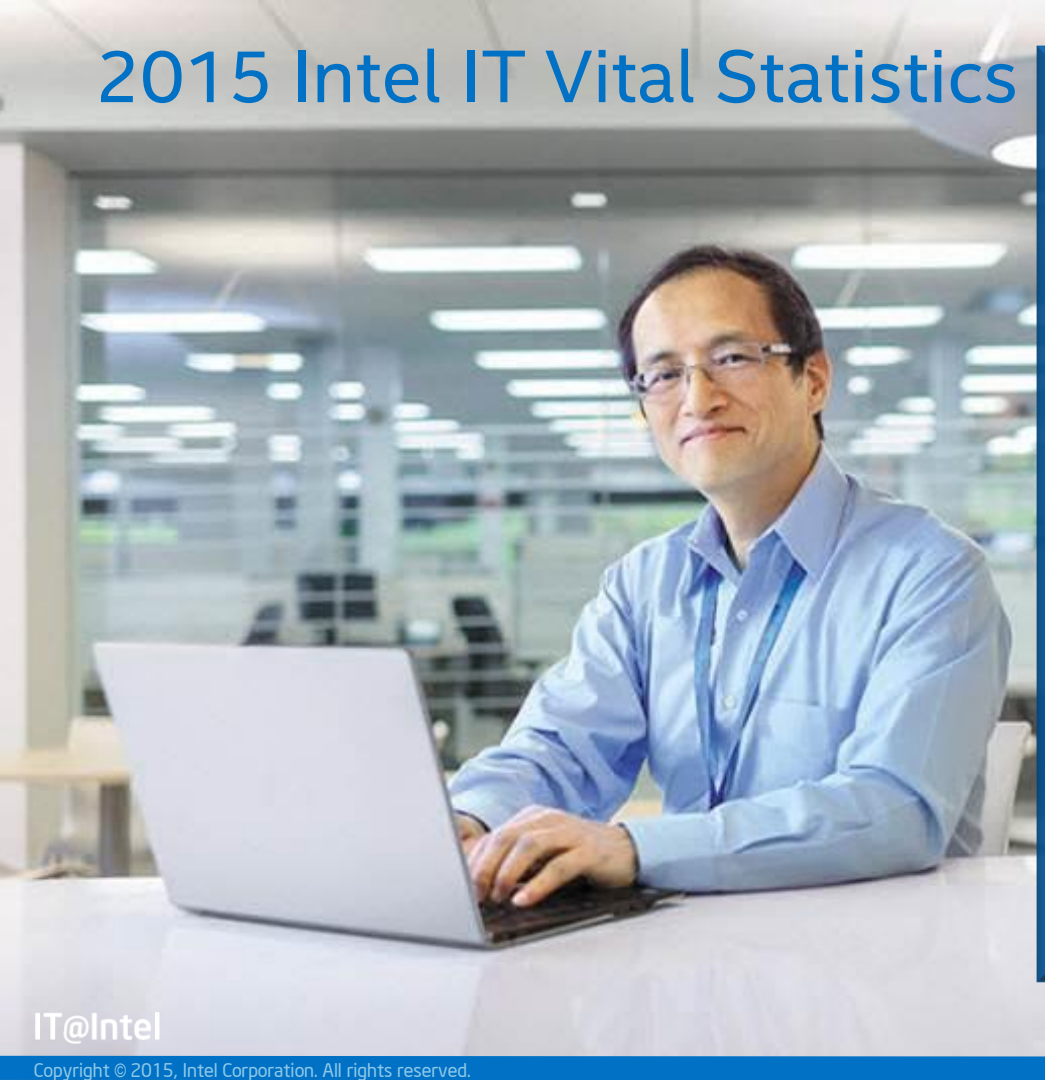
2015 Intel IT Vital Statistics



>6,065 IT employees
50 global IT sites

>106,000 Intel employees[1]
170 Intel sites in 66 Countries

61 Data Centers
(91 Data Centers in 2010)
80% of servers virtualized
(42% virtualized in 2010)

>119,000+ Devices
100% of laptops encrypted
100% of laptops with SSD's
>53,700 handheld devices
164 mobile applications developed

Source: Information provided by Intel IT as of Jan 2015
[1]Total employee count does not include wholly owned subsidiaries that Intel IT does not directly support

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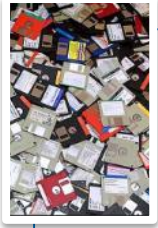
Our Challenges

1300+ Applications

Large Workforce to Retrain



Huge Legacy Base

Retooling

Processes

Culture

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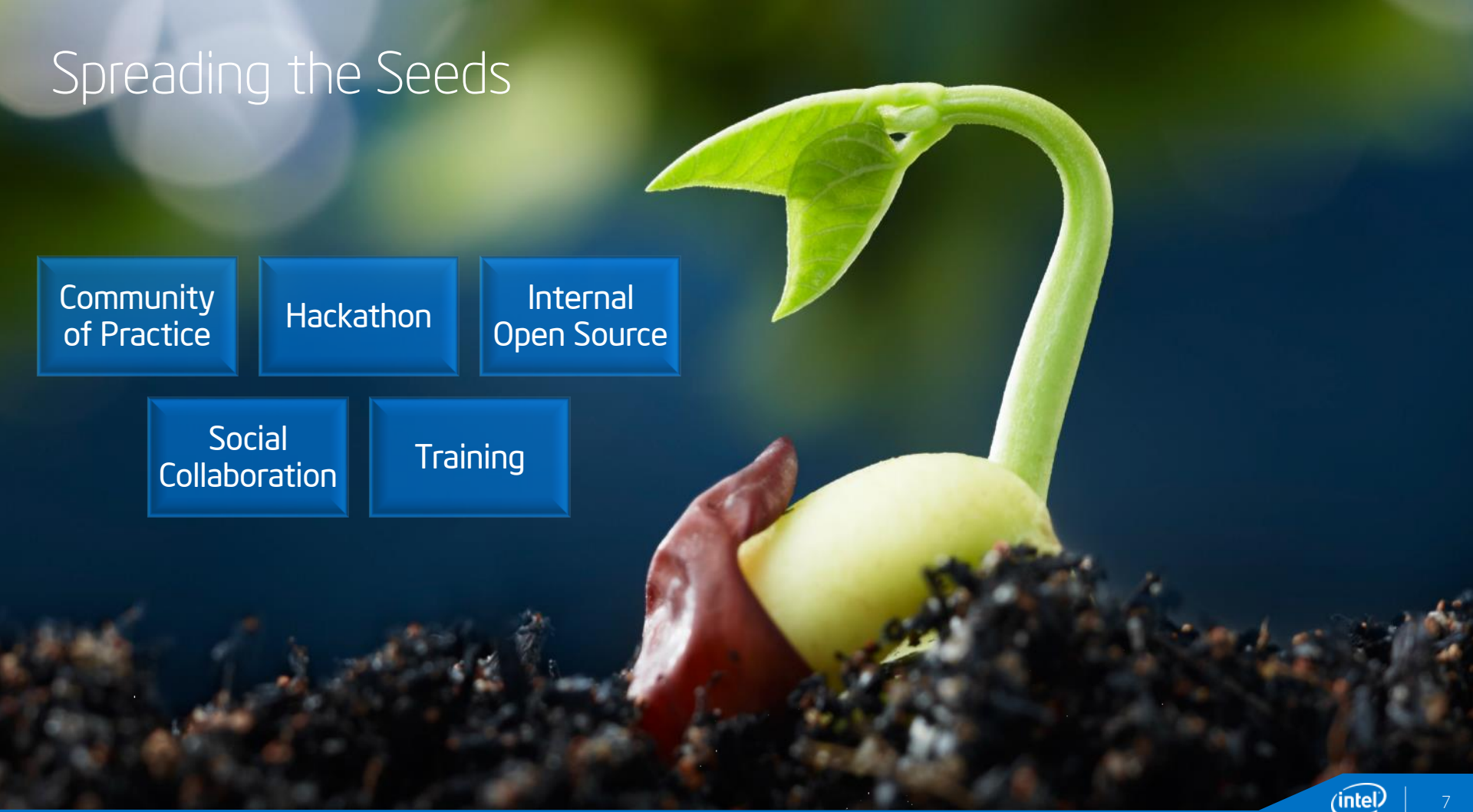
Our Approach

Spreading the Seeds

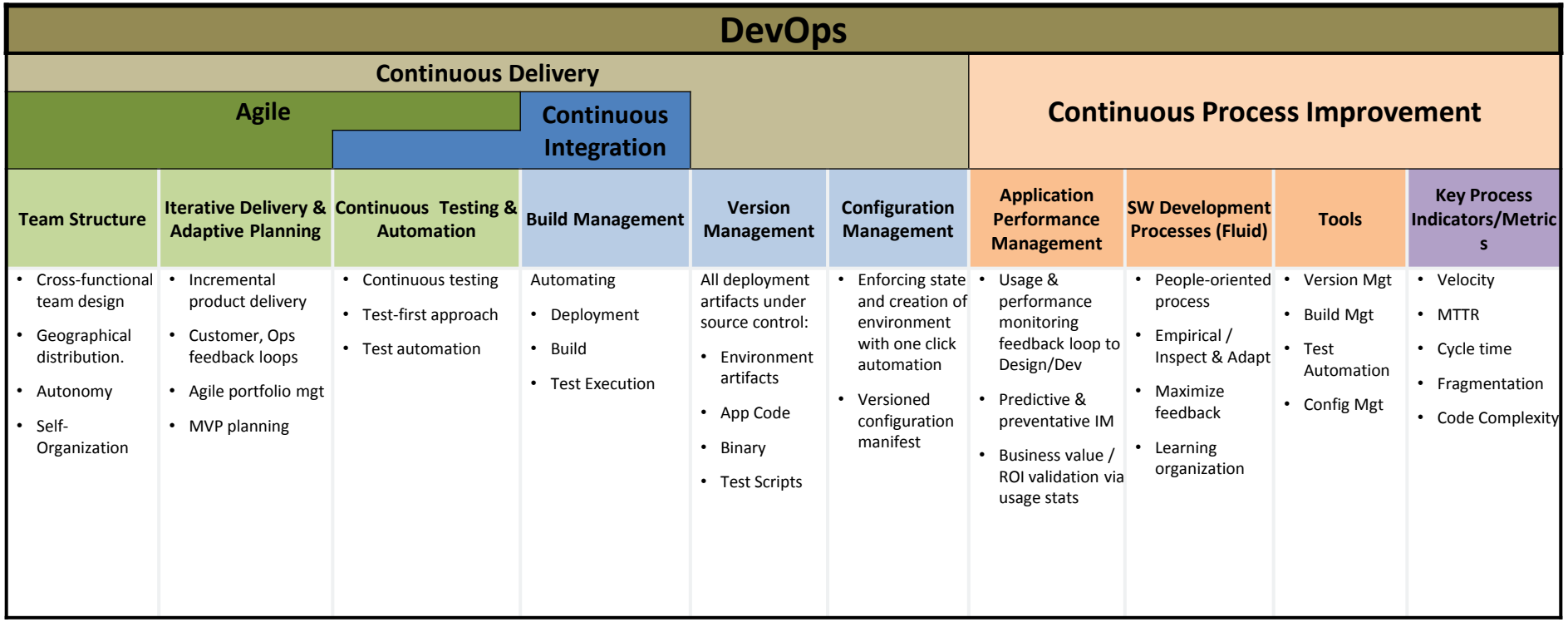


Making it Easy

- Technology Roadmap
- Easy Self-Service
- Streamline Processes

Continuous Improvement Large Scale

DevOps Maturity Model



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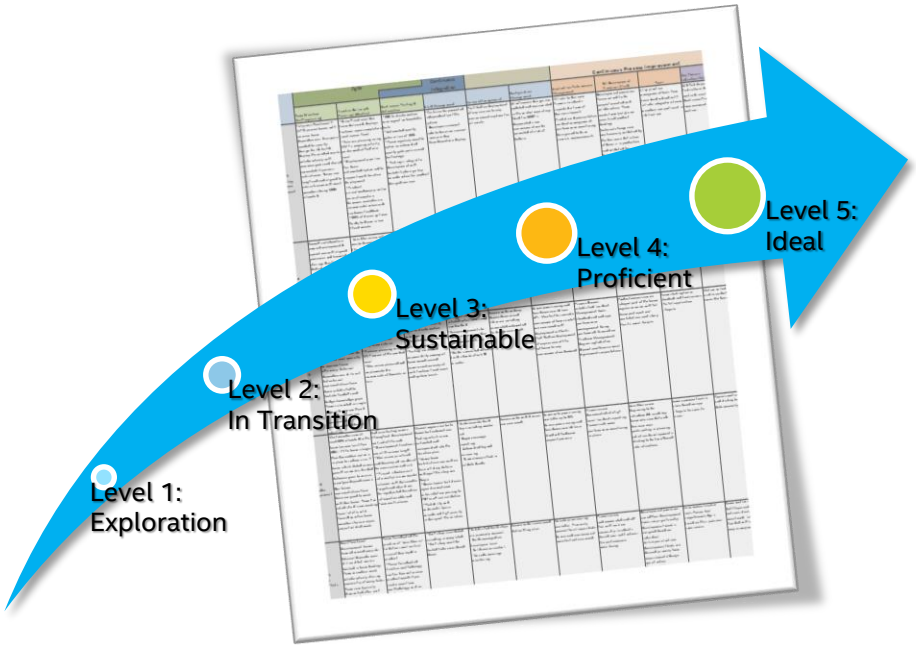
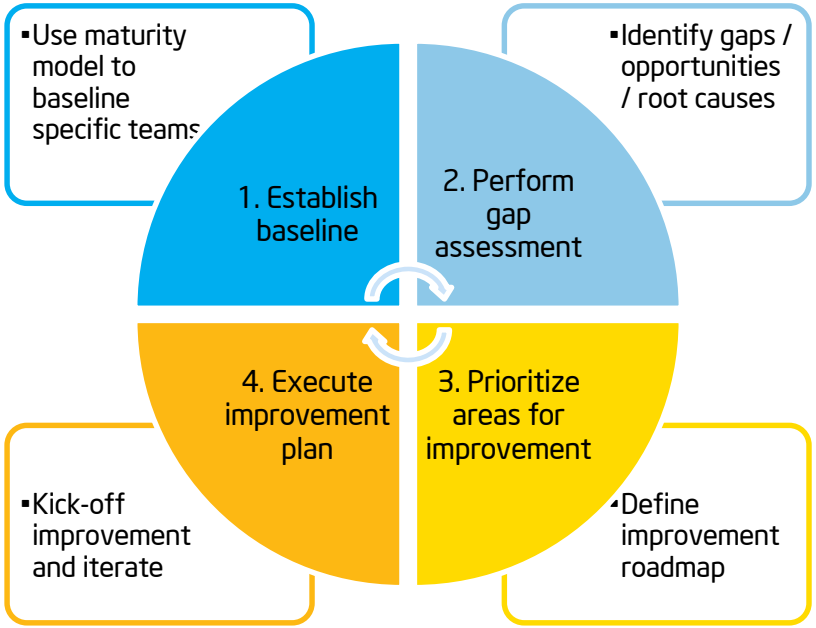
Team Improvement Kata – DevOps Maturity Assessment





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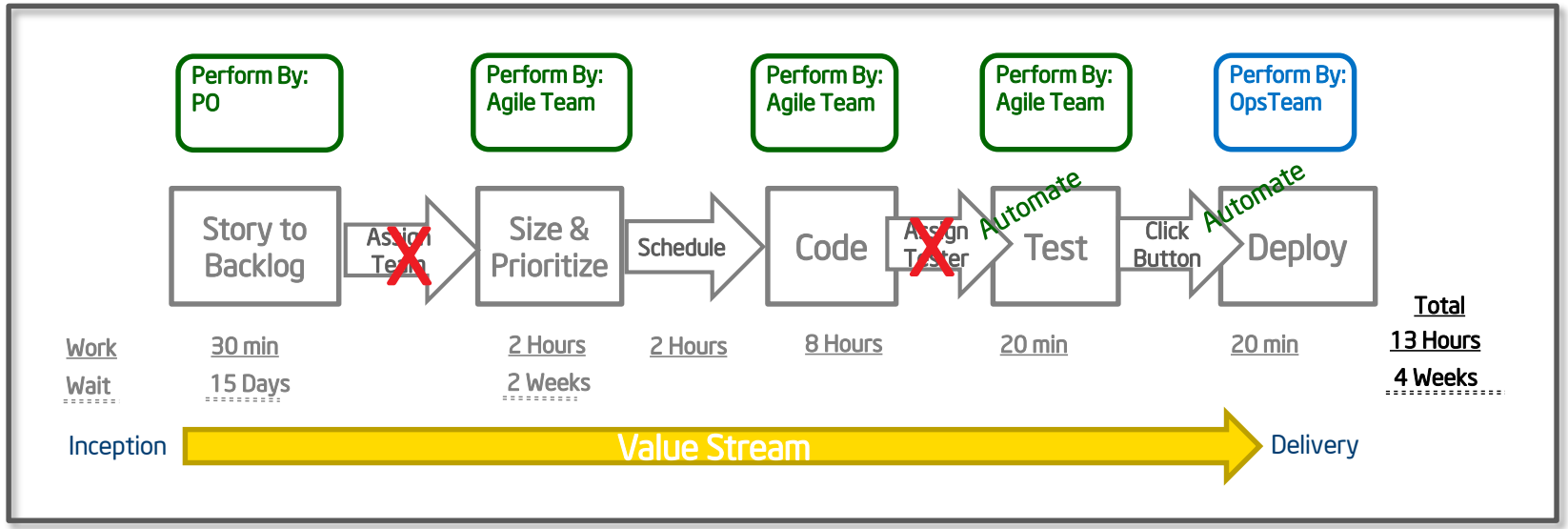
Team Improvement Kata – Kaizen



- Identify End-to-End ***Value Stream (VS)***, *so "local" optimization is avoided*
- Identify the waste and document problems in the whole value chain
- Developed a solid business case for the key problems and their solutions
- Leverage the results from the Initial Maturity Assessment and take them into consideration when selecting the process or a family of processes you want to focus on

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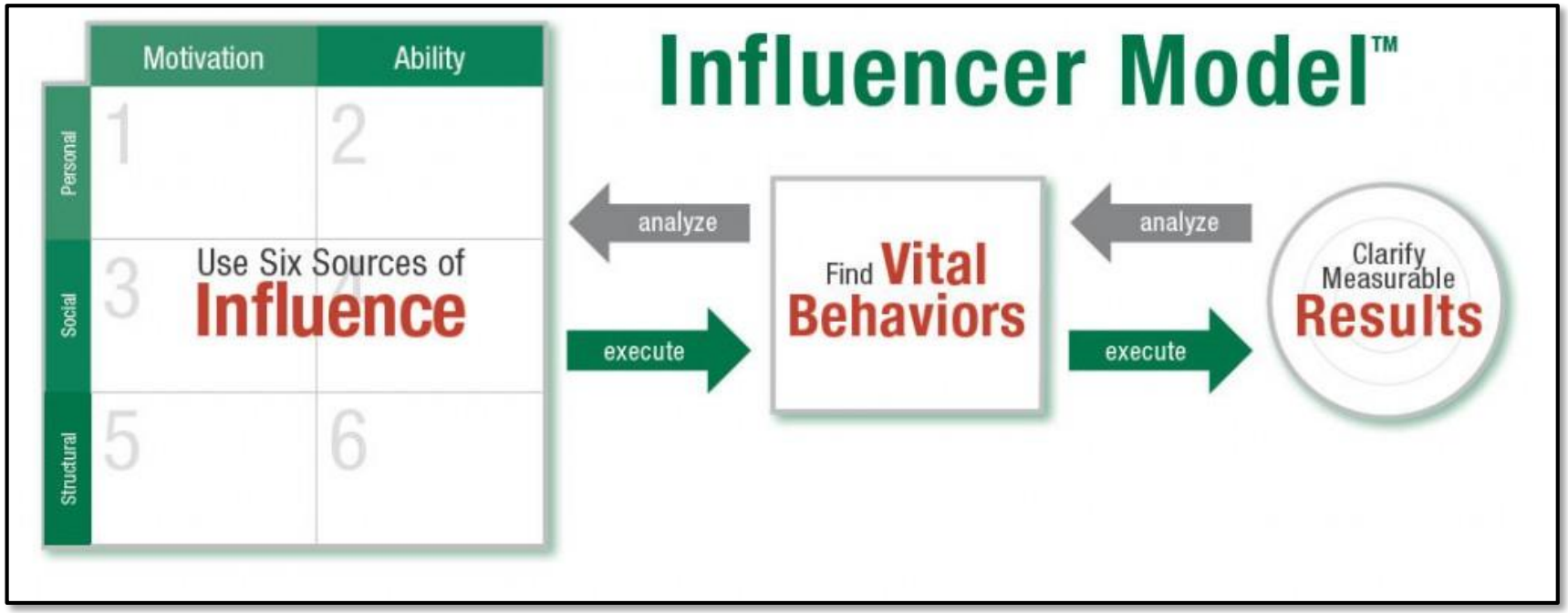
Org Improvement



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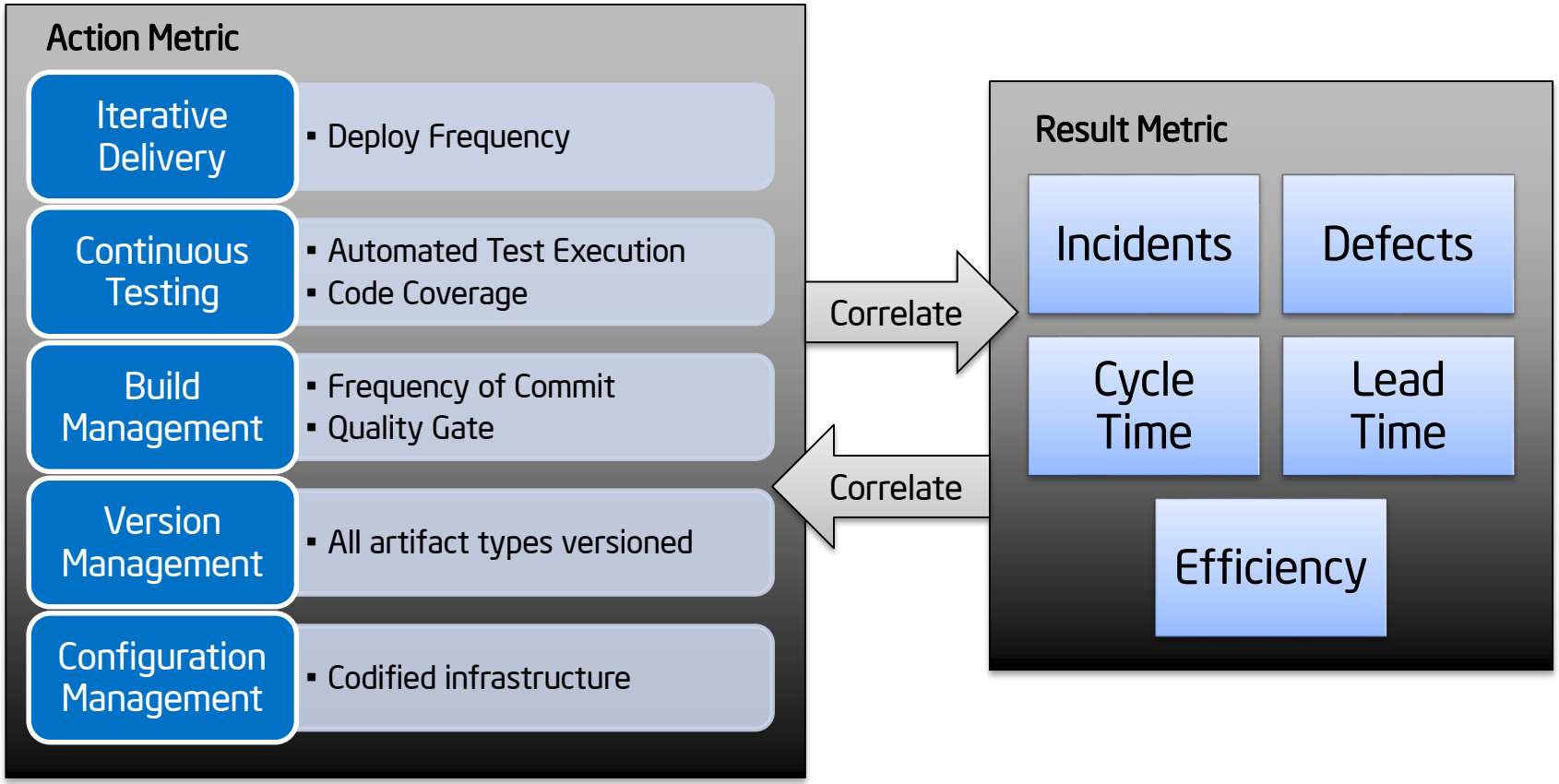
Measurable Results



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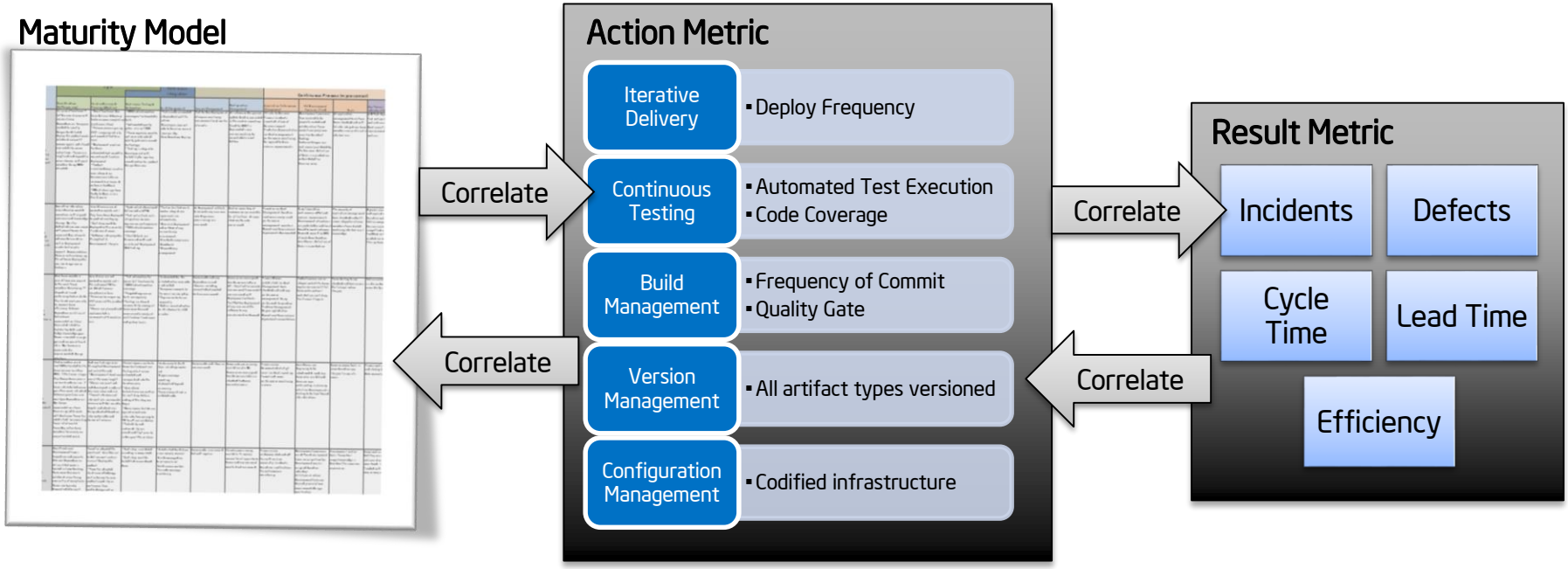
Measurable Results



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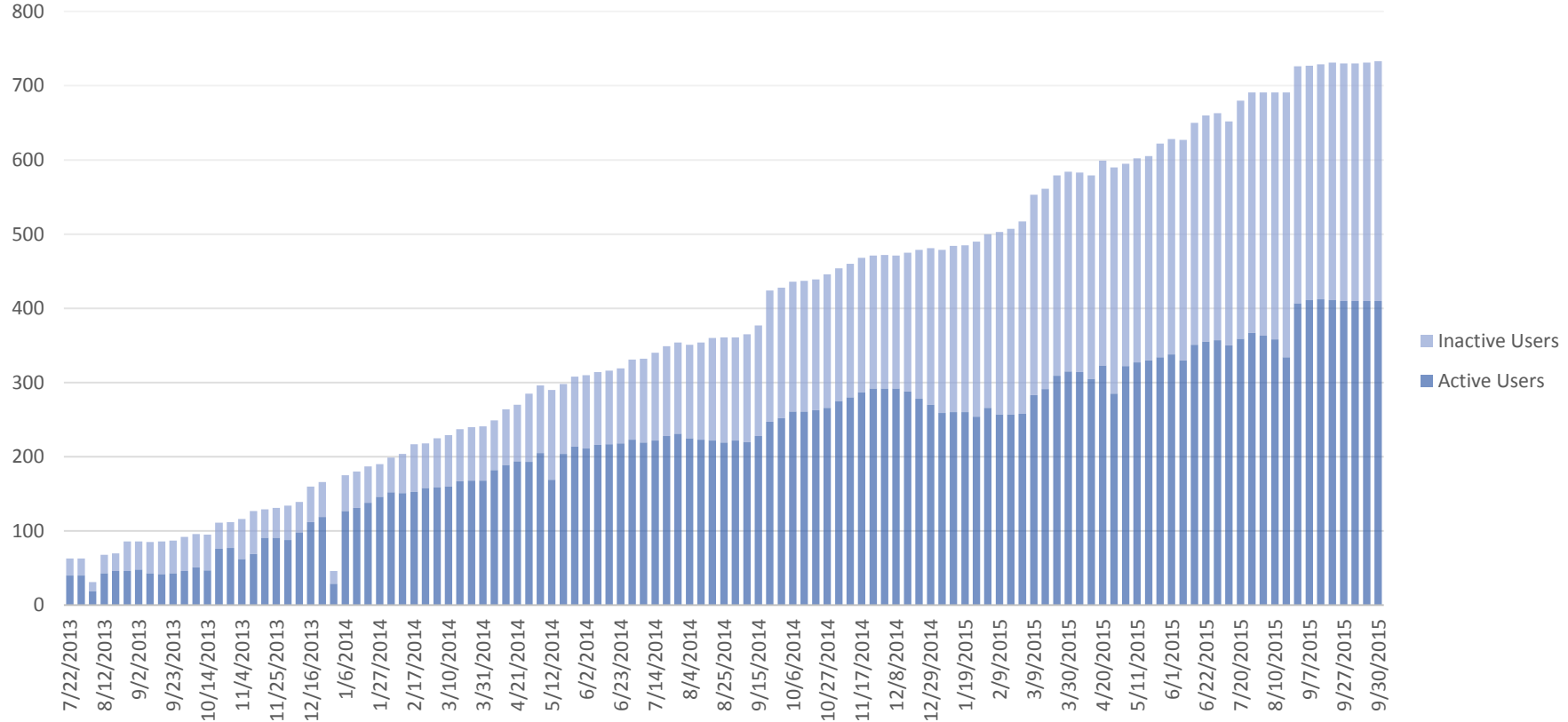
Results

Continuous Integration Tools User Counts



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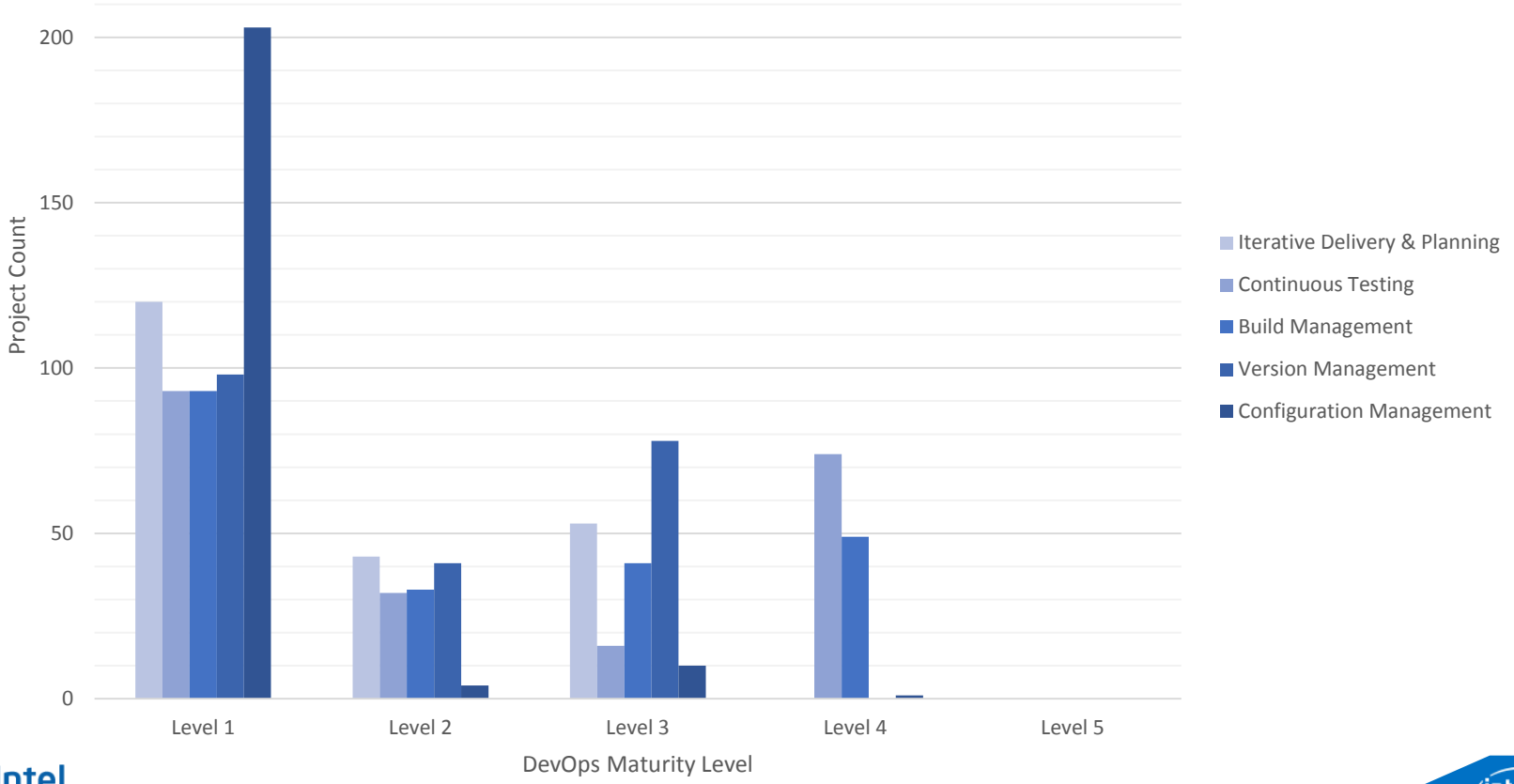
Projects Maturity Snapshot (from CI Tool)



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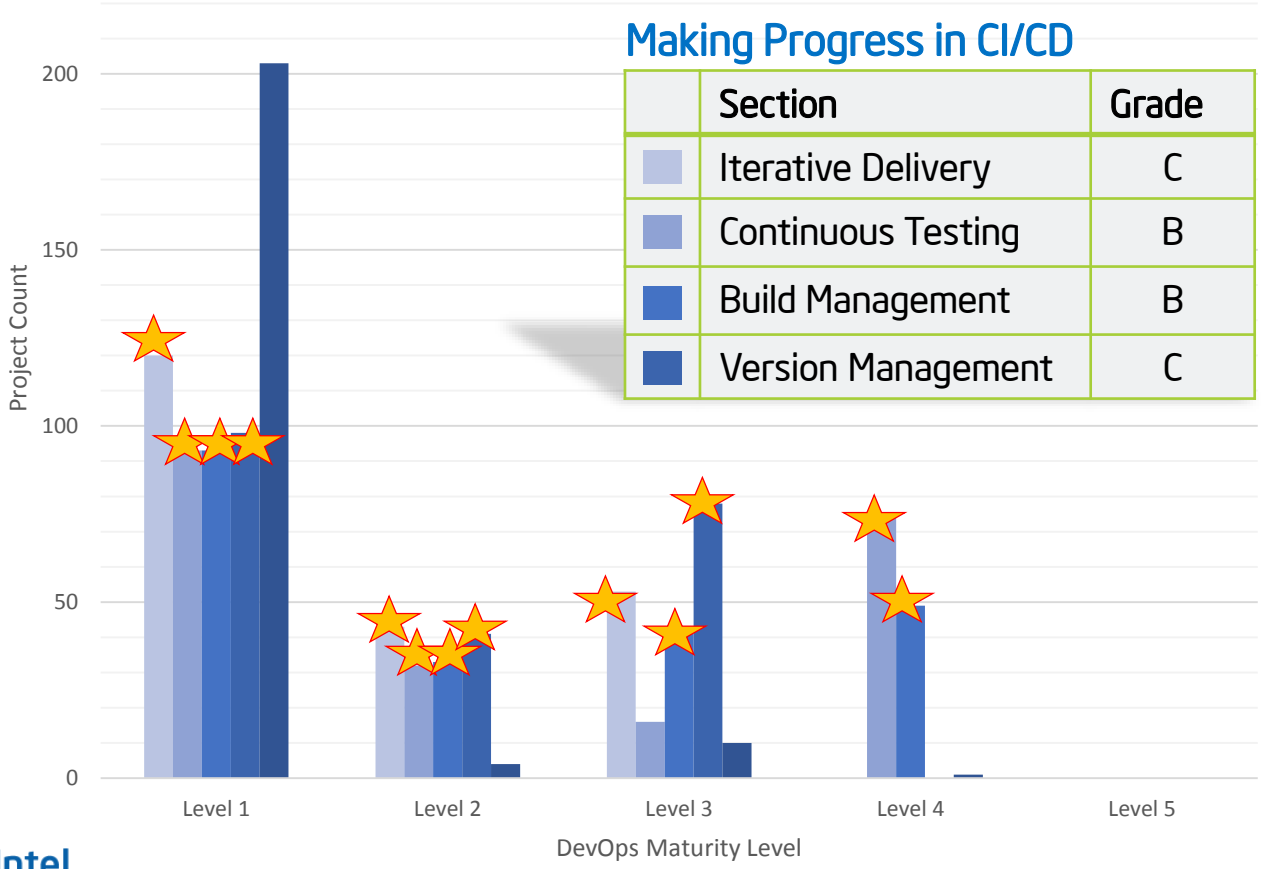
Org Maturity Level Assessment



Making Progress in CI/CD

	Section	Grade
	Iterative Delivery	C
	Continuous Testing	B
	Build Management	B
	Version Management	C

- Iterative Delivery & Planning
- Continuous Testing
- Build Management
- Version Management
- Configuration Management

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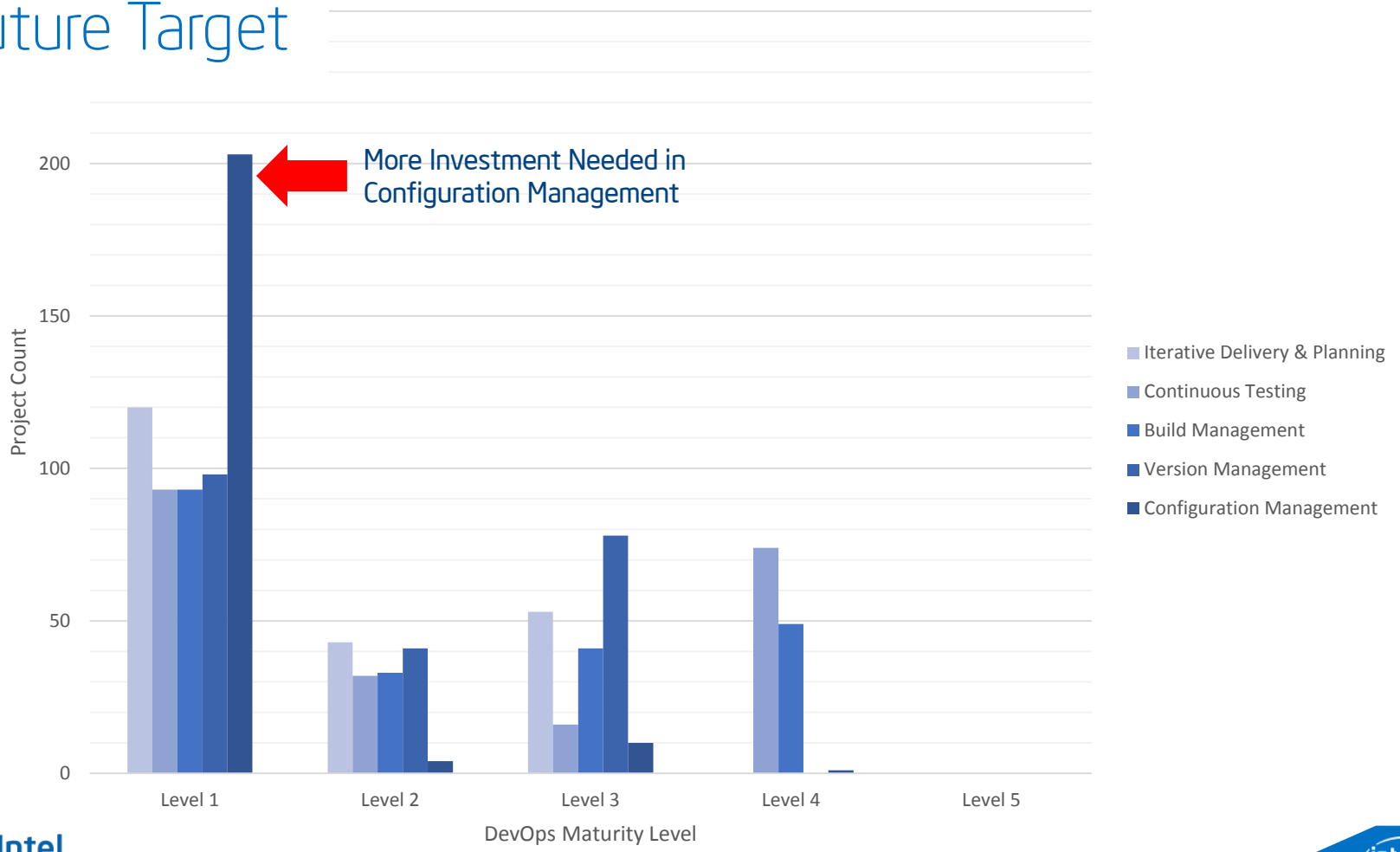
Future Target



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Future Target

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Takeaways

Key to Success for Large Scale Transformation -- Organization Improvement Kata

- Develop Measurement
- Development Plan to Identify and Change Vital Behaviors
- Measure Impact of Every Actions and Investments

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Wish List

Tools

- Better End to End Integration
- Incorporate more machine learning in testing tools
- Security Scanning Tools

More Tips & Collateral on

- Engaging The Majority & The Laggard

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