

The background of the slide features a close-up, high-angle shot of a robotic hand with multiple articulated fingers. The hand is positioned over a computer keyboard, with its fingers poised as if about to type. The lighting is soft, highlighting the metallic textures of the robot and the keys of the keyboard. The overall tone is professional and technological.

# Introduction to CGI and “Quality Engineering”

# CGI is among the largest independent IT and business consulting services firms in the world



**77,500**  
professionals

**80%**  
shareholders

**10**  
focused  
industries

**5000+**  
clients

**9.2/10**  
client loyalty  
score

**150+**  
mission-critical  
IP-based solutions

**5**  
continents

**\$11.5B**  
annual revenue

**\$22.6B**  
backlog

*Figures are in Canadian dollars.  
Statistics verified as of September 2019.*

# A few of our clients

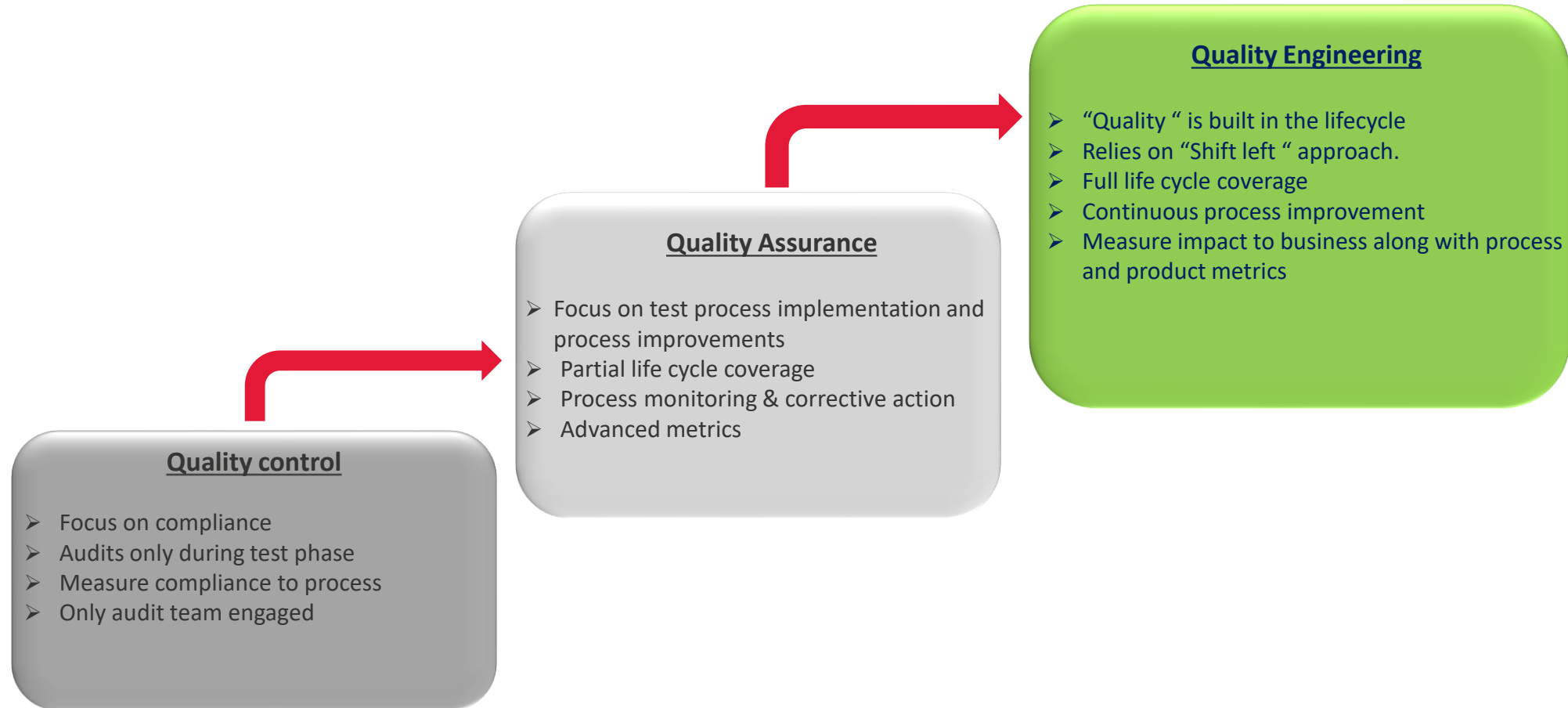
Financial Services	Health	Government	Communications	Utilities
    	     	    	     	  
Oil & Gas	Manufacturing	Transportation	Post & Logistics	Retail & Consumer Services
   	     	   	   	    

Over 5,000 commercial and government organizations worldwide

# Quality Engineering



# Quality Engineering evolution



# Key driving factors – for “Quality Engineering”

- Speed to market, alignment with agile principles
- Everyone is accountable for software quality
- Automation is a key enabler to increase “Velocity” of time to market
- Devops CI/CD is the new paradigm
- Focus on technical debt reduction

# Quality Engineering Toolset

JUnit	Selenium	TestNG	JMeter
<ul style="list-style-type: none"><li>• Open-source unit testing framework for Java programming language</li><li>• Provides annotations to attach with Java methods</li><li>• Provides assertions to test the Java methods</li><li>• Improves code quality as the code is tested at the unit level early during the development</li></ul>	<ul style="list-style-type: none"><li>• Open-source automation tool</li><li>• Used to automate web applications running in the web browser</li><li>• Supports all the modern browsers i.e. Chrome, Firefox, Edge, Safari</li><li>• Supports all the operating systems</li><li>• Supports Java, Python, JavaScript, C#, Perl, Ruby to write the automation code</li><li>• Integrates with Cucumber BDD testing framework to achieve end to end automation in Agile projects</li></ul>	<ul style="list-style-type: none"><li>• Open-source unit testing framework with additional testing support</li><li>• Enables running test suites consisting of multiple test cases</li><li>• Provides enhanced reporting for the test suite runs</li></ul>	<ul style="list-style-type: none"><li>• Open-source performance testing tool</li><li>• Used for Load/Stress testing</li><li>• Supports HTTP, HTTPS, FTP, SMTP, TCP and various other protocols</li><li>• Supports various reports for performance analysis/tuning</li></ul>

# Quality Engineering Demo



Unit Testing

- Used by SDETs (Software Development Engineers in Test) for unit testing
- Used for TDD (Test Driven Development)



UI Automation

- Used by QEs (Quality Engineers) and SDETs to automate the web applications



Agile Test Design

- Cucumber BDD framework is used to write test cases in Gherkin language
- The Gherkin test cases fully support Agile projects



Automation orchestration  
and Reporting

- Used to run Selenium automation test suites
- Enhances automation test reporting



Performance Testing

- Used for performance testing – load/stress
- Supports various front/back end technologies





# Questions?



# Wishing all of you great success in your career!

Please reach out to us for any questions

Anthony Deluca – [Anthony.Deluca@cgi.com](mailto:Anthony.Deluca@cgi.com)

Lakshmi Ranganathan – [Lakshmi.Yeriranganathan@cgi.com](mailto:Lakshmi.Yeriranganathan@cgi.com)

Sandeep Singh – [Sand.Singh@cgi.com](mailto:Sand.Singh@cgi.com)

Justin Newman – [Justin.Newman@cgi.com](mailto:Justin.Newman@cgi.com)