

QMS Awareness

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Agenda

- What is Quality?
- Common Causes of Software Failure
- Examples of Software Failure
- Aspects of Quality
- Ensuring Assurance
- Process
 - What is Process?
 - How to read a Process?
 - Why Follow Processes?
 - Processes @ Cybage
- Q@Core Framework
- Process Implementation Infrastructure and Management
- Project Attributes
- Q & A

What is Quality?

Quality : A degree to which the system meets specified requirements and user expectations.

"Quality in a product or service is not what the supplier puts in. It is what the customer gets out and is willing to pay for." – **Peter Drucker**

"Degree to which a set of inherent characteristics fulfills requirements." The standard defines requirement as need or expectation. – **ISO 9000**



Common causes of Software Failure

Common problems in the software development?

- Ambiguous or changing requirements
- Unrealistic schedule
- Inaccurate estimates
- Inadequate testing
- Miscommunication
- Lack of Reviews
- Lack of Unit Testing
- Lack of Team commitment
- Lack of Client commitment/collaboration
- Costing/Budgeting issues
- Inappropriate project execution methodology
- Unmanaged Risks etc....



Examples of Software Failure

Google announced its plans to shut down Google+ over the next 10 months after data of almost 500,000 users was compromised due to a bug that was present for more than 2 years. At the same time, the company mentioned that there was no evidence of misuse of any kind of data or any scope for vulnerability.

Over 1 m Nissan vehicles were recalled for an airbag software malfunction that caused a failure in recognizing an adult sitting in the passenger seat. As a result, the airbags would fail to deploy during a mishap of a collision, leading to many fatal accidents.

Students applying for the online Masters of Business Administration- Common Entrance Test in Pune, India, complained of a software error after receiving surprisingly low marks on their exams.



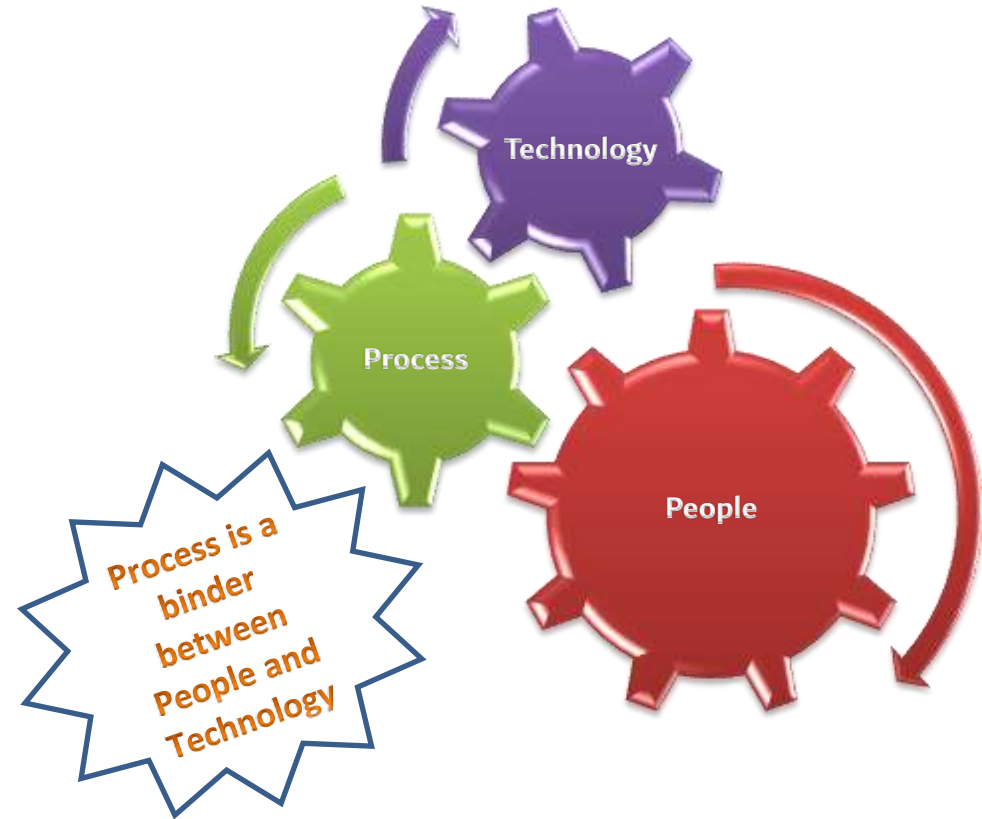
Aspects of Quality

Parameter	Quality Control	Quality Assurance
Focus	Product quality	Process quality
Character	Reactive	Proactive
Goal	Find Defects	Prevent defects
Tools	Testing	Quality audits

Ensuring Assurance

People, Technology and Process have been the cornerstone of success for any organization

- **People** vary in skills and human traits like common sense, intelligence and whatsoever else constitutes the ability to do the things
- **Technology** advances with it's own speed
- The **Process** evolves predictably, but people and technology will change in less predictable ways

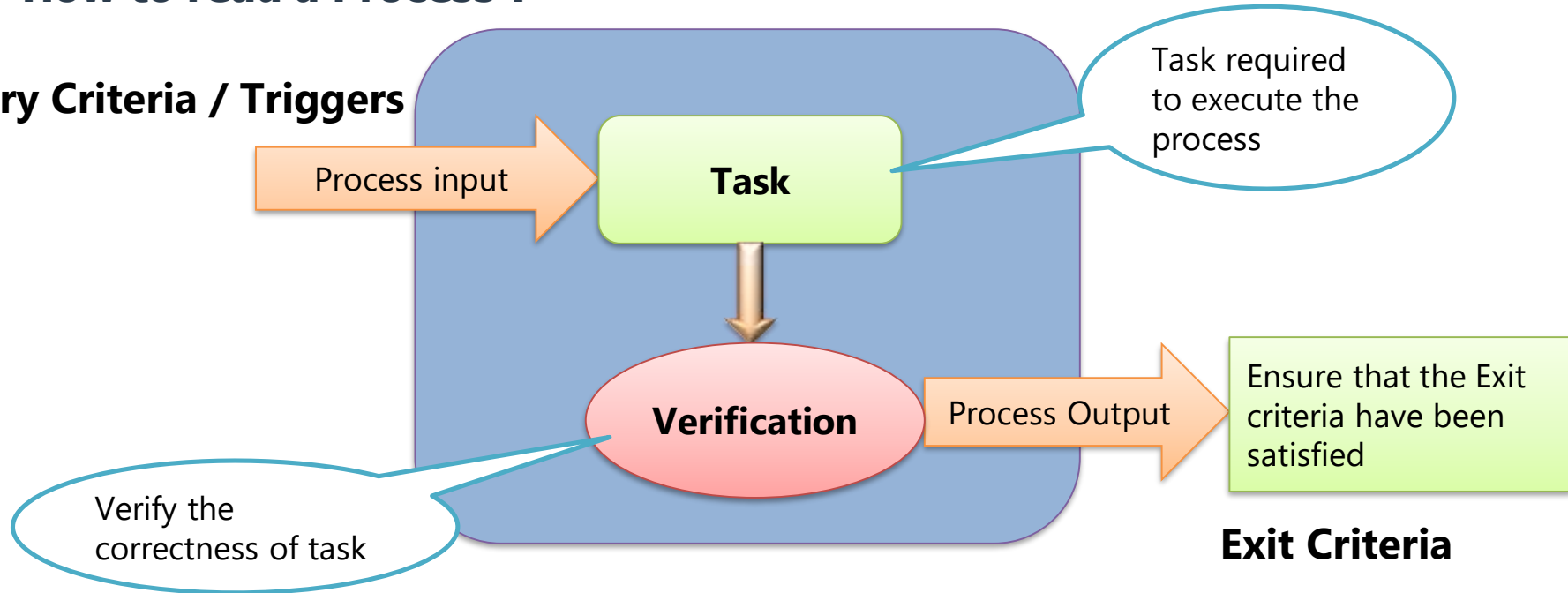


What is Process?




How to read a Process ?

Entry Criteria / Triggers



[Process Writing Method : **ETVX** Model]

Why Follow Processes?

- 
- Systematic Approach
 - Consistency
 - Transparency
 - Clarity

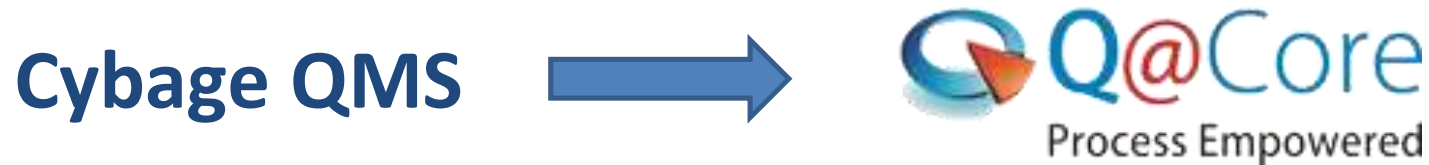
- Better Risk Management
- Makes project activities person independent and process dependent

- High quality delivery
- Improved productivity
- Higher client satisfaction

*Processes are
integral part of
project execution*

Processes @Cybage

- Processes at Cybage are inherited from a world class Process Model – CMMI
- Processes defined in Cybage are published as Quality Management System [Q@Core]
- Q@Core at Cybage is compliant to CMMI (DEV), Version 1.3, Level 5
- Adherence to Processes is monitored through Audits by Process Department



Q@Core Framework



Apex Manual

- Organization information
- Policies and Processes
- Lifecycles and Execution Models
- Roles and responsibilities



Process Manual

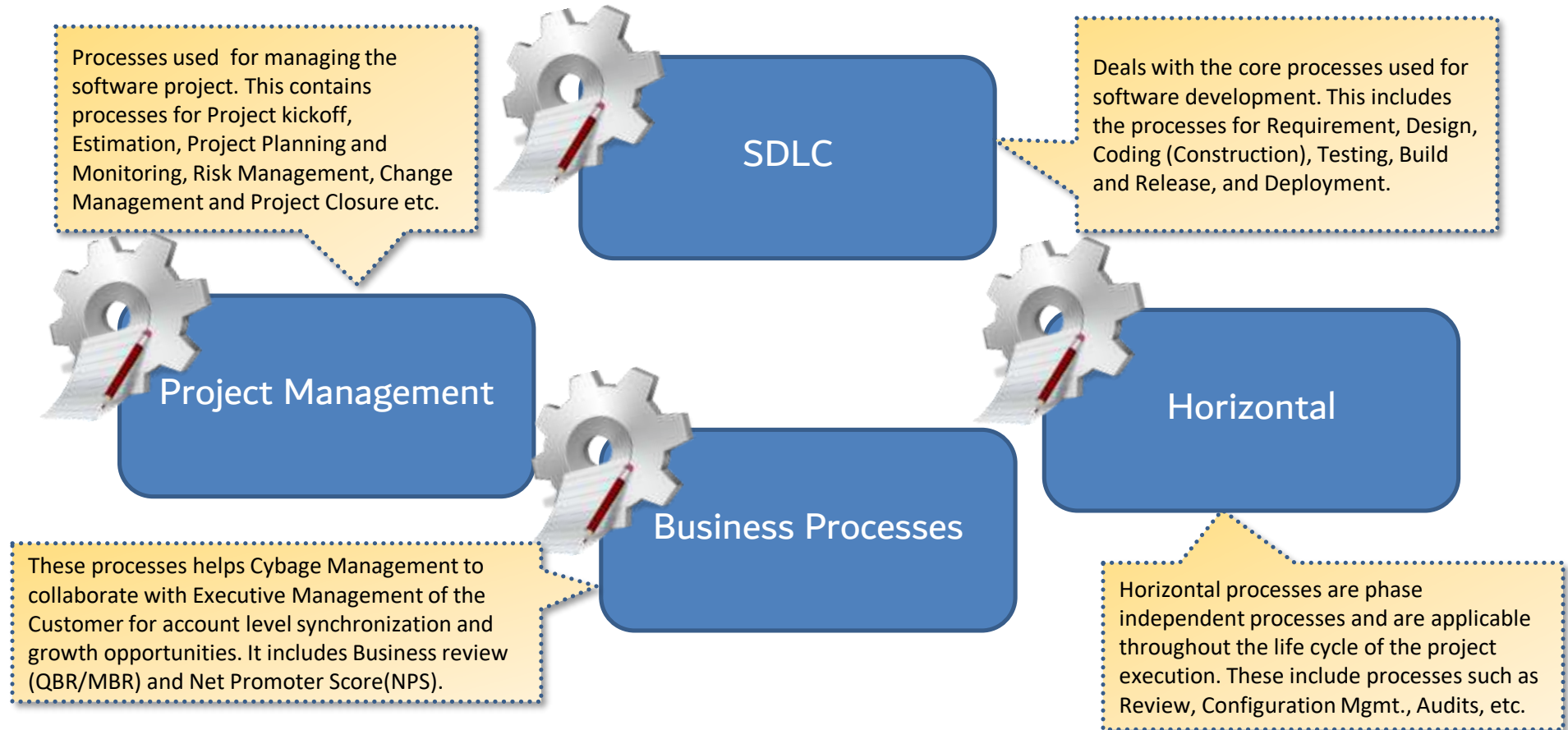
- SDLC
- Project Management
- Horizontal
- Business Review Process



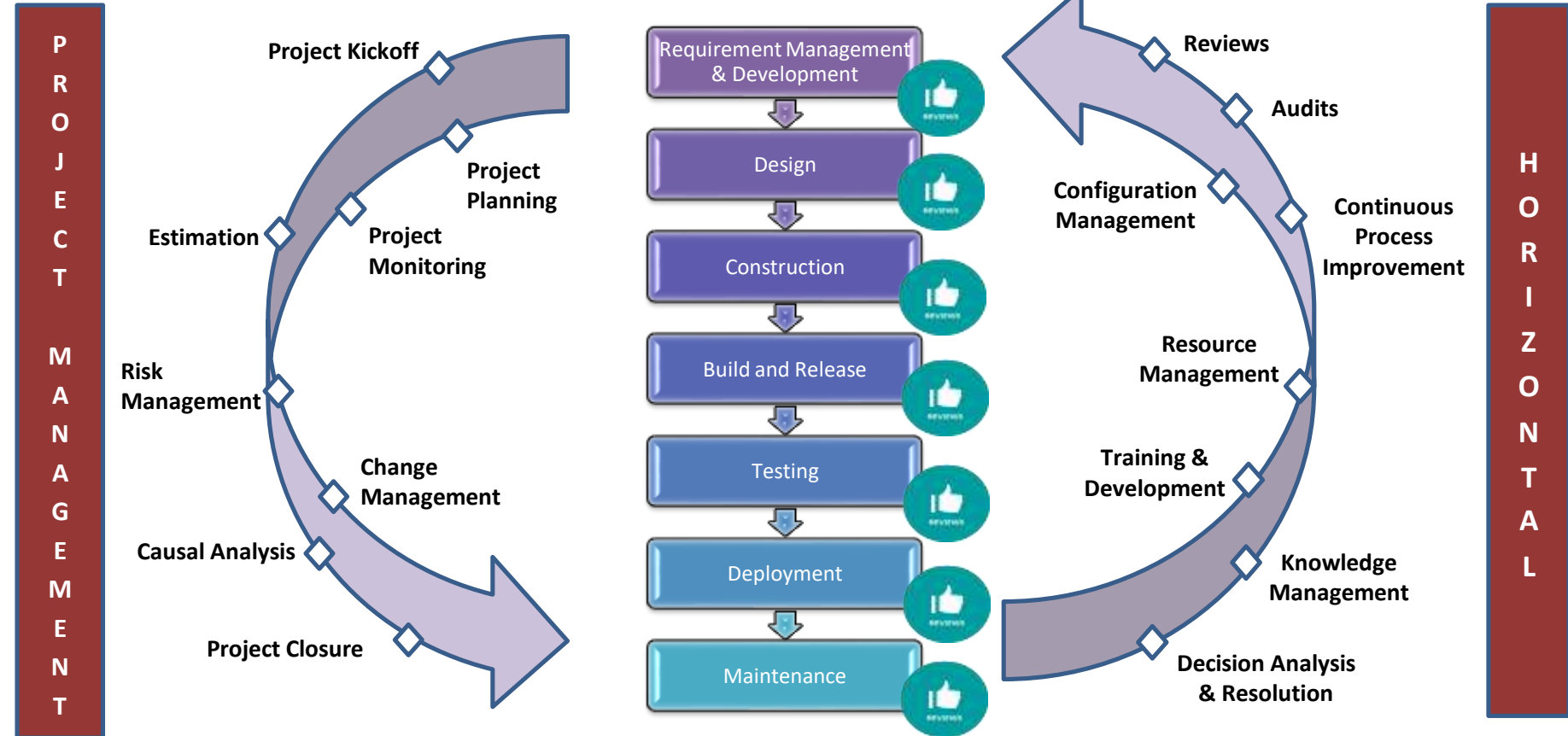
Departmental Manual

- Content Services
- Admin
- Human Resource
- Information Systems
- Support Services

Process Manual

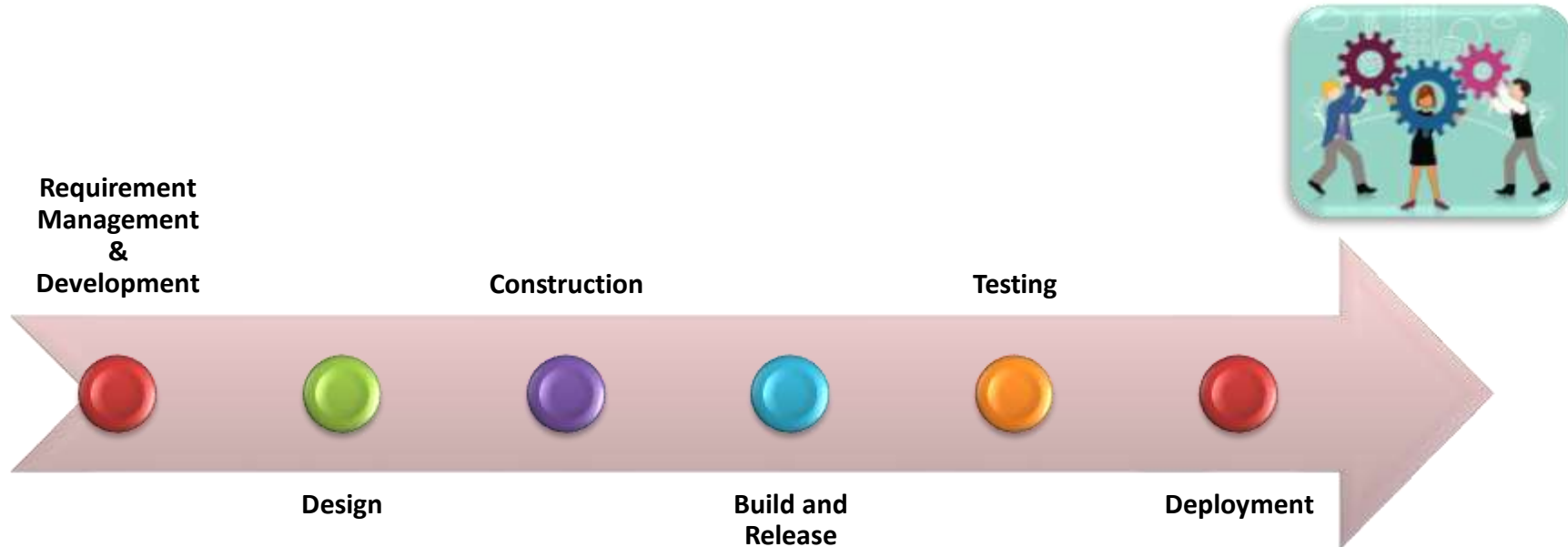


Quick Look at Processes



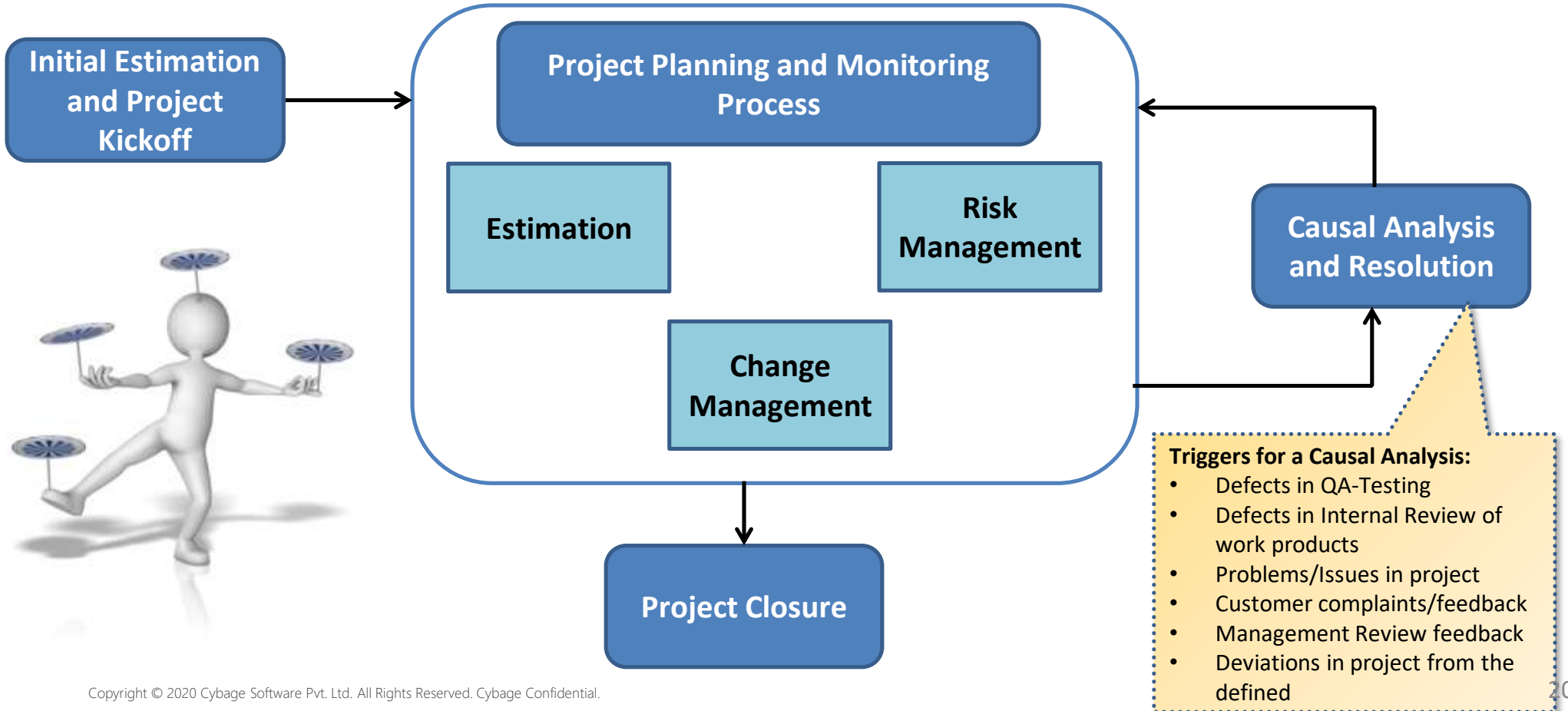
✓ Q@Core can be customized / tailored based on Project Context and need

SDLC Processes

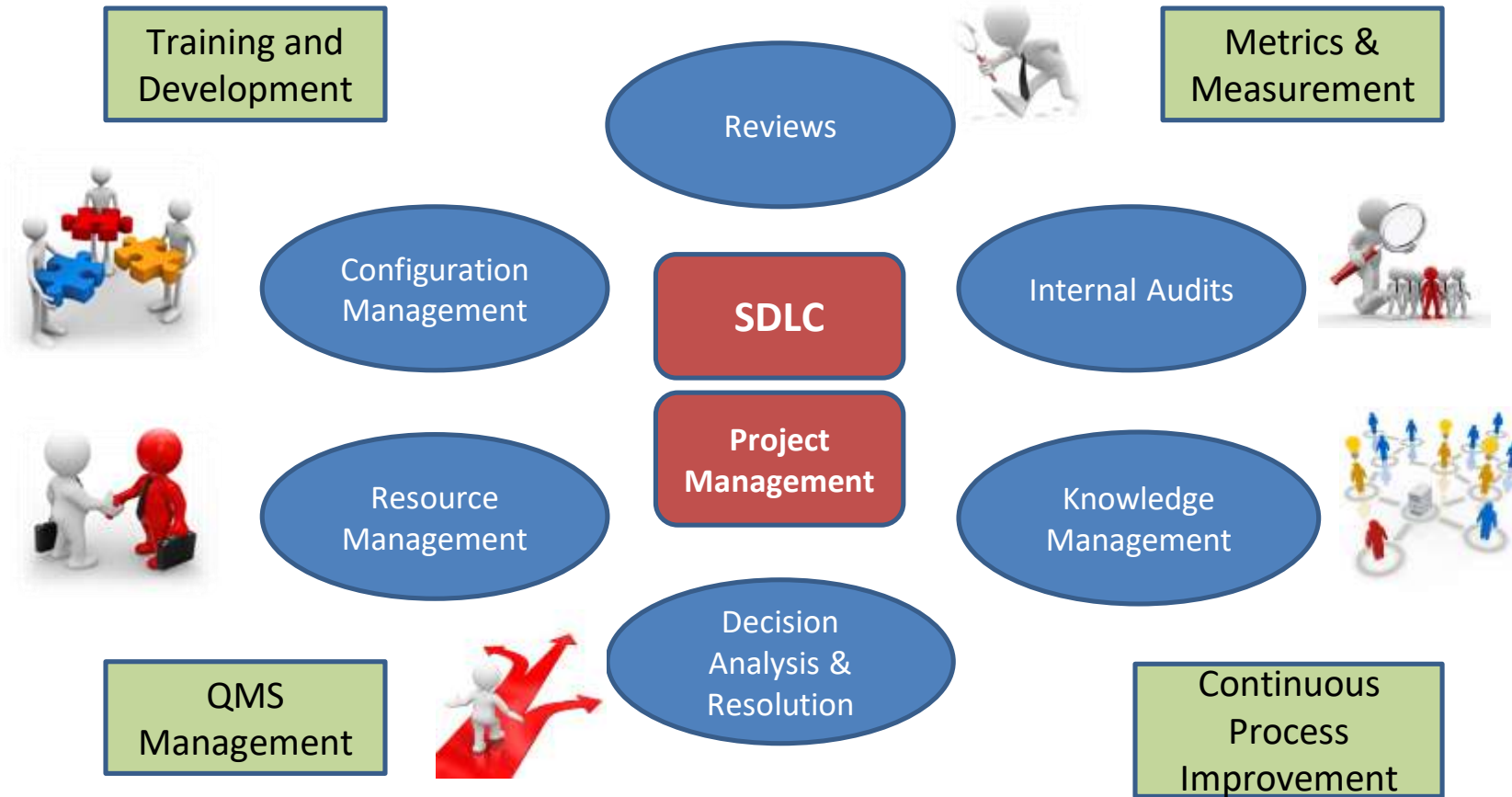


SDLC processes are applied to all software development projects irrespective of internal or external customers

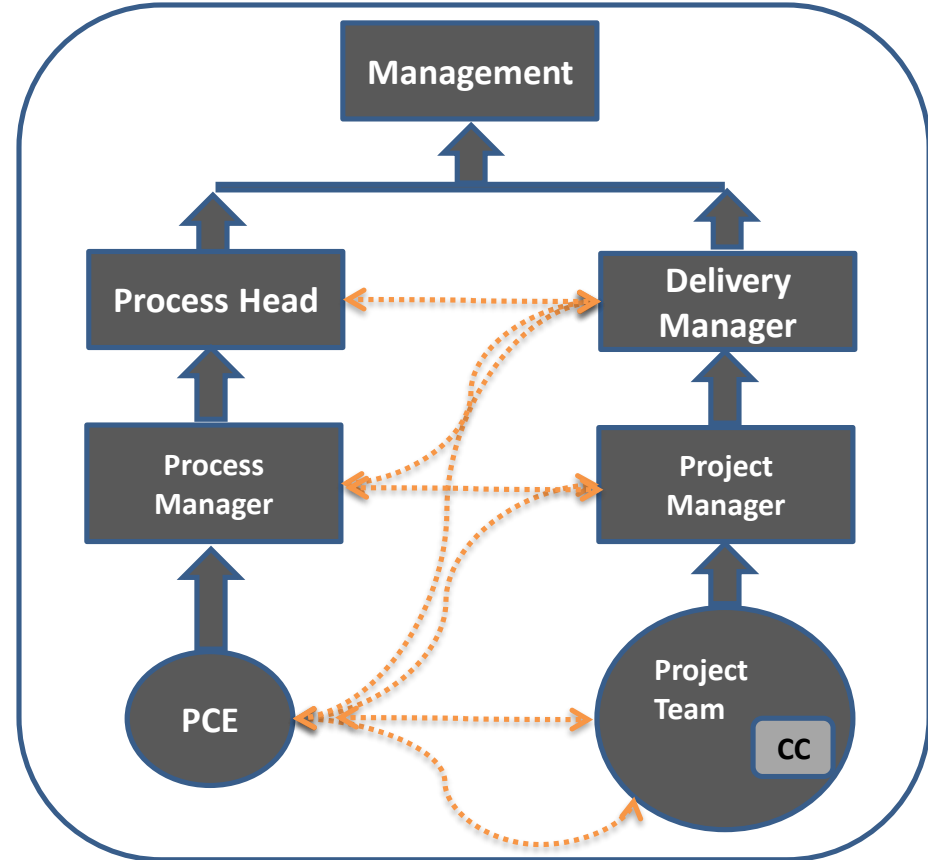
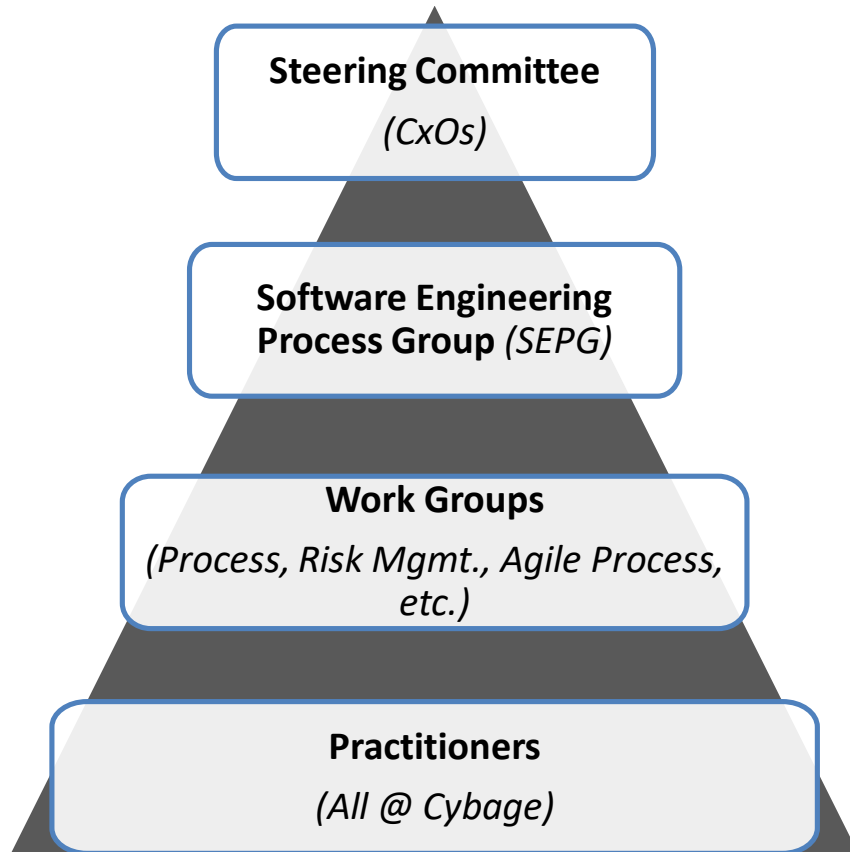
Project Management Processes



Horizontal Processes



Process Implementation Infrastructure and Management



Project Attributes

Project Management Model

- **Cybage Managed :**
Jointly managed, largely Cybage managed
- **Client Managed :**
Staff Augmentation - Cybage premises
- **Staff Augmentation :**
Staff Augmentation - Client premises

Project Execution Model

- Waterfall / Iterative
- Agile
- Non-standard
- Support Services

Project Type

- Development
- Sustained Engineering
- Maintenance – Prod. Support
- Pure-Testing
- Support Services
- Content Services
- UX
- Non-standard

Project Size

- **Tiny**
(Resource Count 0 to <1)
- **Small :**
(Resource Count 1 to <=3)
- **Medium :**
(Resource Count >3 and <=9)
- **Large :**
(Resource Count >9)

- ✓ Applicable processes 'for every combination' is published in Q@Core
- ✓ Q@Core can be customized / tailored based on Project Context and need

Where are these Processes?

The screenshot displays the Q@Core web application interface. At the top, there is a navigation bar with links for Admin, Finance, HR, and IS. A search bar is located on the right. Below the navigation bar, a banner features a quote: "If it's worth doing, it's worth documenting." Below the banner, there is a grid of five icons representing different manuals: Process@Cybage, Apex Manual, Process Manual, Department Manual, and Training Material. The main content area includes a welcome message, a mission statement, and a list of features.

Q@Core
Process Empowered

APEX MANUAL | PROCESS MANUAL | DEPARTMENT MANUAL | TRAINING MATERIAL

"If it's worth doing, it's worth documenting."

PROCESS

Process@Cybage | Apex Manual | Process Manual | Department Manual | Training Material

Welcome to Q@Core

Cybage Mission statement:
In an industry where responsiveness, quality and consistency are key to survival, we are driven by a mission to deliver above and beyond the industry values and customer expectations

About Q@Core

- Enables delivery of quality products and services to our customers
- Facilitates tailoring of processes depending on project and business requirements
- Supports use of metrics that are based on business needs
- Enables defect prevention activities at various levels
- Enables systematic and step-wise process improvement (using CMMI Framework)



Test Your Knowledge

1. What is Process?
2. What are the benefits of Process?
3. Where are the Processes at Cybage published?
4. What are the sections in Q@Core?
5. Apex Manual Contains.....
6. Name the categories in the Process Manual
7. State Processes in Project Management section in Q@Core
8. State Processes in Horizontal section in Q@Core
9. What are the type of projects executed in Cybage?
10. What are the Project Categories available in Cybage?

Thank You!