

System Approach to Innovation Management

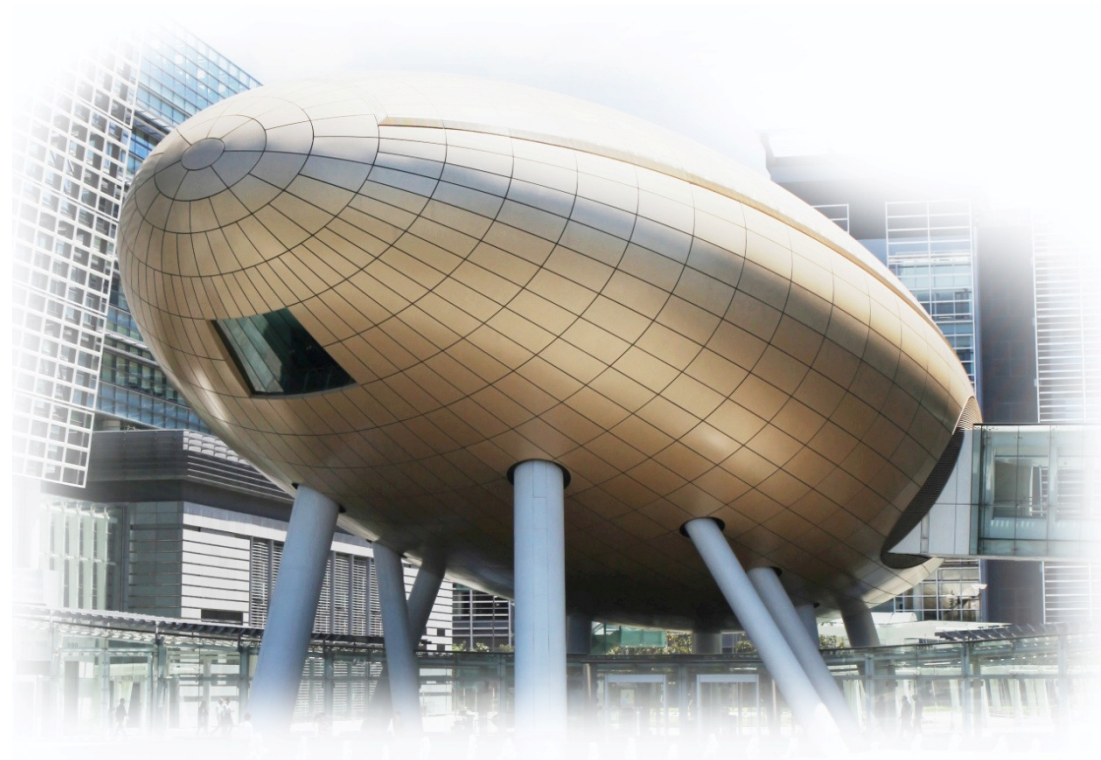
Integration of Quality and Innovation Management System



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Manager, (Quality System)
Corporation Development

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Content

- Introduction of new version of QMS – ISO9001:2015
- Introduction of Innovation Management System (InnoMS) based on PD CEN/TS 16555-1:2013
- Integration approach from QMS to InnoMS

Introduction

- **Quality – Making things better**
- **Innovation – Making better things**
 - Quality Management - are coordinated activities to direct and control an organization with regard to quality
 - Quality Management System - is a set of elements of an organization's management system concerned with managing quality
- Quality & Innovation Management System - is a set of elements of an organization's management system for ***making better things better***

Main Change in ISO9001:2015 (DIS version)



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- Adoption ISO Directives “Annex SL” – a high-level structure (HLS)
- Risk-based Thinking
- Fewer prescribed requirements
- Less emphasis on documents
- Define the boundaries of the QMS
- Increase leadership requirements

The Revised Quality Principles



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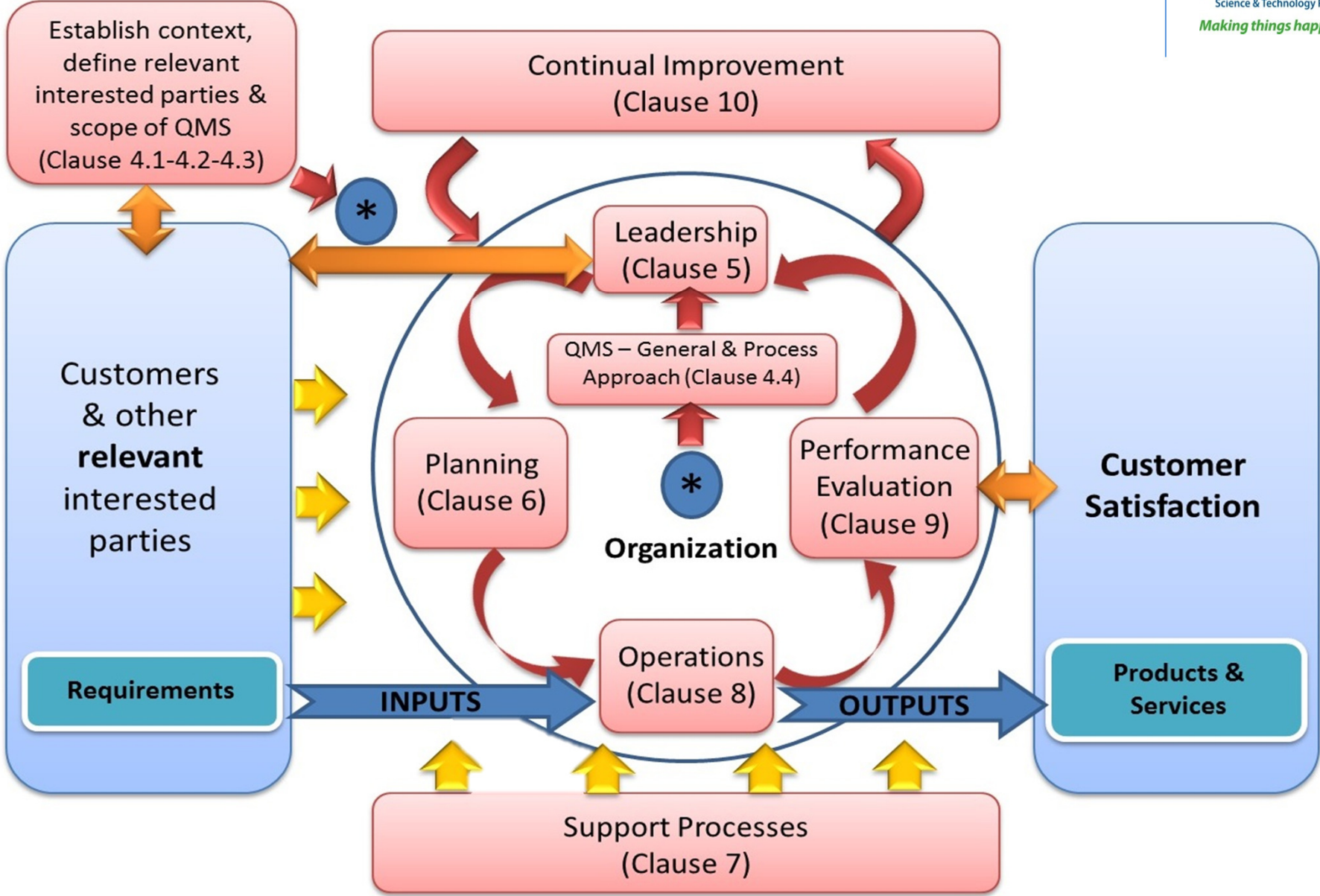
ISO Directives “Annex SL” – a high-level structure (HLS)

Clauses	Clauses
1. Scope	6. Planning <ul style="list-style-type: none"> - Actions to address risks & opportunities - Objectives and plans to achieve them
2. Normative references	7. Support <ul style="list-style-type: none"> - Resources - Awareness - Competence - Communication - Documented information
3. Terms and definition	8. Operations <ul style="list-style-type: none"> - Operation planning and control
4. Context of organization <ul style="list-style-type: none"> - Understanding the organization and its context - Needs and expectations of interested parties - Determining the scope - Management System 	9. Performance Evaluation <ul style="list-style-type: none"> - Monitoring, measurement, analysis & evaluation - Internal audit - Management review
5. Leadership <ul style="list-style-type: none"> - Leadership and commitment - Policy - Roles, responsibility and authority 	10. Improvement <ul style="list-style-type: none"> - Non-conformity and corrective action - Continual Improvement

Some changes based on “DIS”

- “Products and services” instead of “product”
- “External provision of products and services” instead of “purchasing” – includes outsourced processes
- “Documented information” instead of “Documented procedures and records”
- New Clause 4.1 – “Context of the Organization” (external & internal factors)
- Identification of “interested parties”
- “Actions to address risks & opportunities”
- Organization knowledge
- “Improving products and services to meet known and predicted requirements”

Model of process-based QMS



Innovation of Management System (InnoMS) Standards

- BS 7000-1:2008: Guide to managing innovation
- PD CEN/TS 16555-1:2013: Innovation Management – Part 1: Innovation Management System

Invention vs Innovation



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- The distinction between “Invention” and “Innovation” is that invention is the creation of a new idea or concept, and ***innovation is turning the new concept into commercial success or widespread use.***

BS 7000-1:2008

Guide to managing innovation

- BS 7000-1, Guide to managing innovation – new edition April 2008
- gives guidance specifically in the design and development of innovative and competitive products that satisfies customers' perceived needs and aspirations in the long-term future
- UK Government focus: raise innovation capability in business for benefit of economy

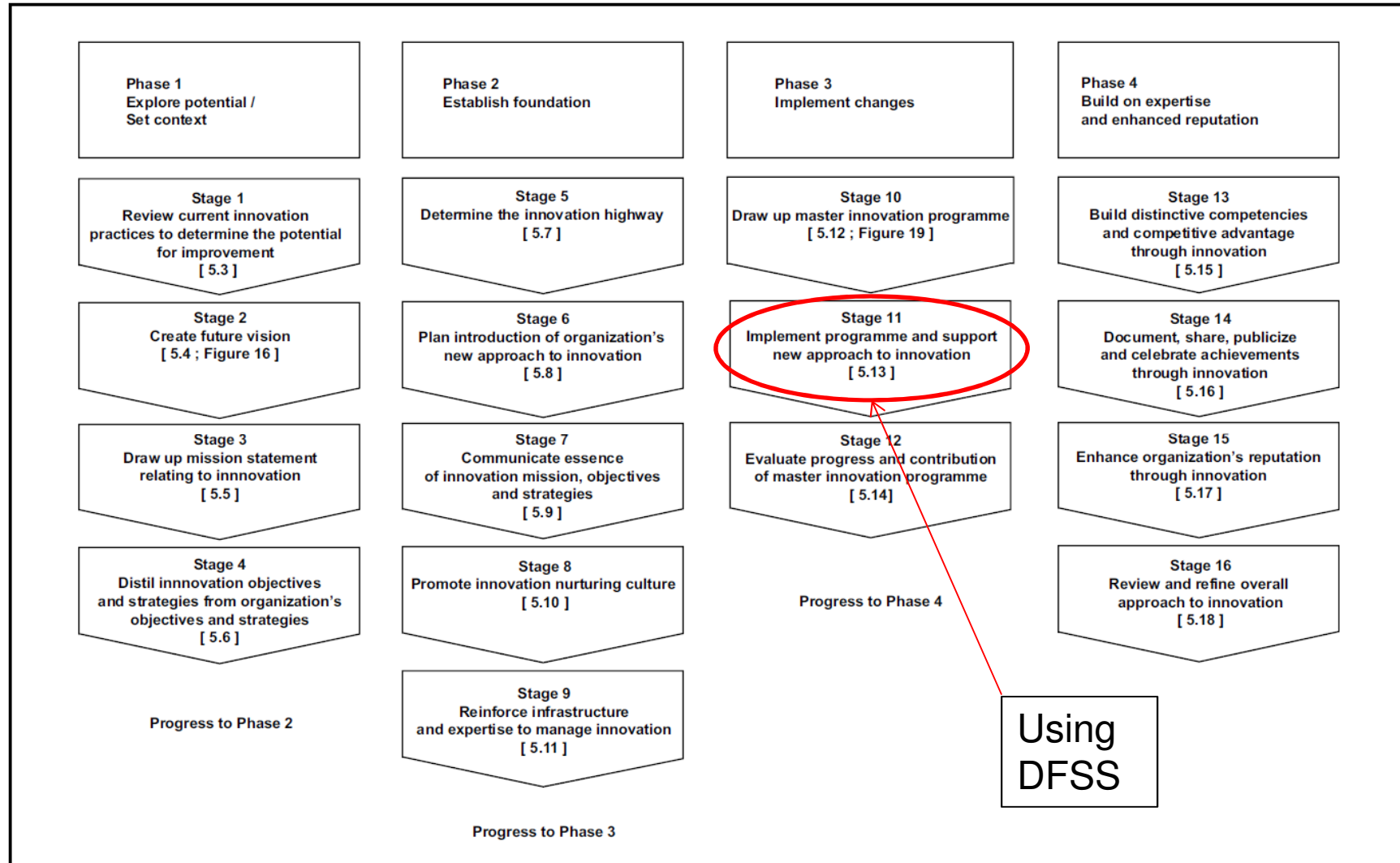
BS 7000-1:2008

- Innovation (3.13)
 - <ideas> successful exploitation of new ideas
 - <process> introduction of changes that are significant departures from the usual way of doing things
 - <product> transformation of an idea into a novel product, operational process or new service
 - <techniques, materials> employment of design or construction techniques, or materials, that do not have a proven history of performance or are not covered by an organization's current practice
- disruptive innovation (3.6)
 - innovation with a significant adverse effect within and/or outside an organization that cannot be influenced or controlled in the short term

BS 7000-1:2008

- Innovation Management System (3.18)
 - formal infrastructure encompassing objectives, strategies and processes, organizational structures and values by which an organization administers innovation

16 stages to managing innovation at the organizational level



CEN/TS 16555-1:2013

Innovation Management System

- The new Technical Specification 'Innovation management – Part 1: Innovation management system' (CEN/TS 16555-1:2013) is the first in a series of seven technical specifications which pursue the following dimensions:
 - - Developing of an innovation strategy and vision
 - - Building an organisation and culture to promote innovation
 - - Introducing a best-fit innovation process
 - - Using methods, techniques and tools to promote innovation
 - - Focusing and measuring the innovation result

CEN/TS 16555-1:2013

- The aim of helping organization increase their innovation capability so that they can generate more value for their stakeholders
- PDCA structure is employed
- InnoMS (3.2) – set of interrelated or interacting elements of an organization to establish innovation policies and objectives as well as processes to achieve those objectives

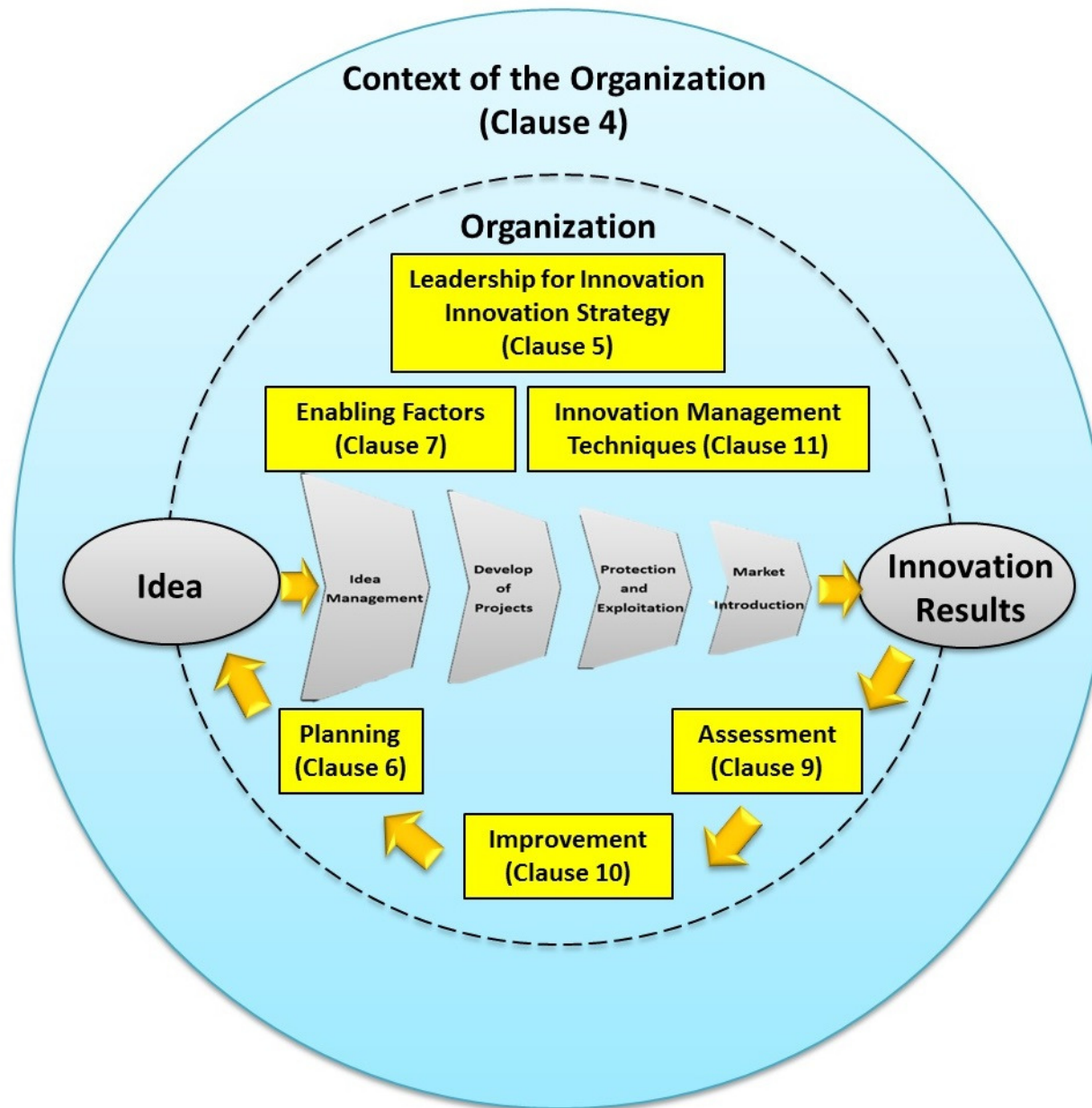


Figure based on CEN/TS 16555-1 figures 1+2

Context of the Organization

- Understand
 - Aspects of Market, technical, political, economic and social
 - Own current & future capabilities regarding Innovation Management (e.g. ICMM)
 - Needs and expectation of interested parties

Leadership for Innovation

■ Develop

- Innovation Vision, Strategy, policies and objectives
- Top Management Commitment
- Fostering an Innovation Culture
- With clearly defined Roles & Responsibilities

Planning for Innovation Success

- Determine
 - Risks and Opportunities (~ ISO 9001:2015)
 - Innovation Objectives
 - Activities, Resources and Milestones

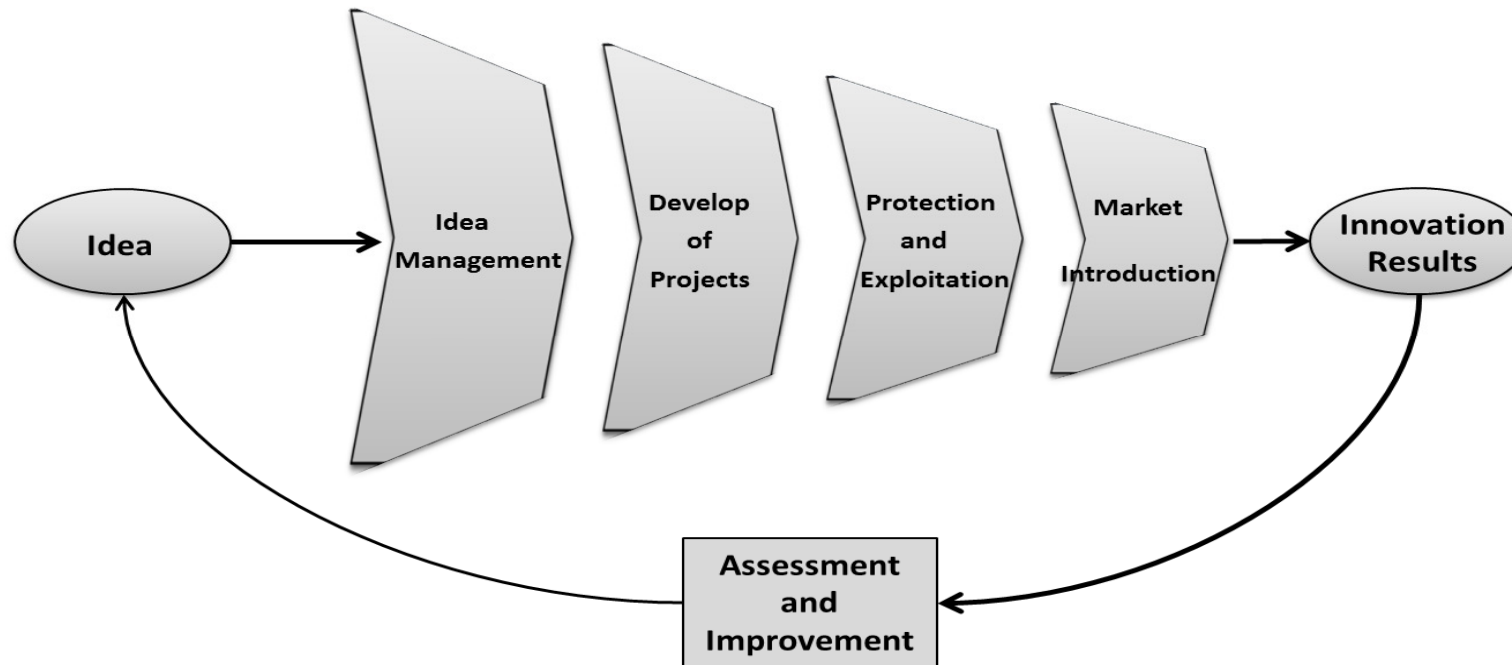
Innovation Enabling Factors



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- Roles and responsibilities
- Resources
- Competence (e.g. Training in TRIZ, Creativity, Thinkertoys, DFSS, ... etc.)
- Awareness
- Communication
- Documented information
- Strategic human resources
- IP and knowledge management
- Collaboration (Internal and External)

Innovation Management Process



- **Innovation Funnel** – aspects included framing and insight generation, idea management, develop of the innovation project, protection & exploitation of outcome and Mkt Introduction

Assessment

- Determine
 - Indicators (Financial and Non-financial)
 - Methods for monitoring
 - Criteria for evaluating
- To ensure
 - Suitability
 - Adequacy
 - Effectiveness
- Of the InnoMS

Improvement



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- Identify and apply corrective actions
- Stimulate learning and continuous improvement

Innovation Management Techniques

■ At System Level

- Understand context
- Develop strategy
- e.g. ICMM

■ At Project Level

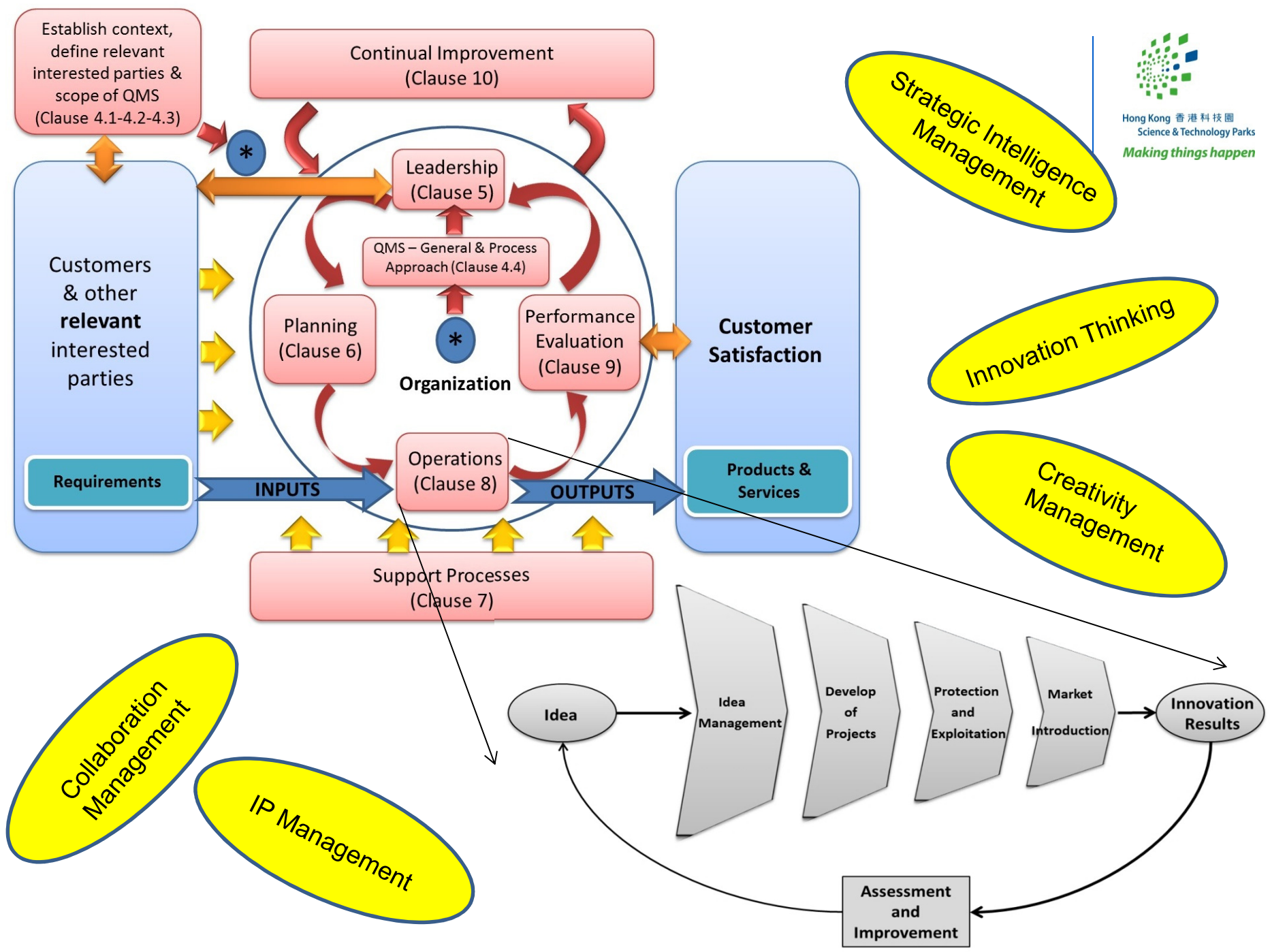
- Generate, evaluate and select new ideas
- Develop the project
- Ensure protection of results
- e.g. DFSS, TRIZ, PMP, etc.



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Integration of Quality and Innovation Management System

Clauses of ISO 9001:2015 (DIS)	Clauses of CEN/TS 16555-1:2013(E)
1. Scope	1. Scope
2. Normative references	2. Normative references
3. Terms and definition	3. Terms and definition
4. Context of organization <ul style="list-style-type: none"> - Understanding the organization and its context - Needs and expectations of interested parties - Determining the scope - Management System 	4. Context of organization <ul style="list-style-type: none"> - Understanding the organization and its context - Needs and expectations of interested parties - Determining the scope - Management System
5. Leadership <ul style="list-style-type: none"> - Leadership and commitment - Policy - Roles, responsibility and authority 	5. Leadership for Innovation <ul style="list-style-type: none"> - Inno Vision & Strategy Development - Leadership and commitment - Innovation culture - Roles, responsibility and authority
6. Planning <ul style="list-style-type: none"> - Actions to address risks & opportunities - Objectives and plans to achieve them 	6. Planning for Innovation <ul style="list-style-type: none"> - Actions to address risks & opportunities - Objectives and plans to achieve them
7. Support <ul style="list-style-type: none"> - Resources - Awareness - Competence - Communication - Documented information 	7. Innovation Enablers/Driving Factors <ul style="list-style-type: none"> - Resources - Awareness - Documented Info - Competence - Communication - Strategic human resources - IP & knowledge management - Collaboration
8. Operations <ul style="list-style-type: none"> - Operation planning and control 	8. Innovation Management Process <ul style="list-style-type: none"> - Development Inno Projects and Assessing the result
9. Performance Evaluation <ul style="list-style-type: none"> - Monitoring, measurement, analysis & evaluation - Internal audit - Management review 	9. Performance Assessment of the InnoMS <ul style="list-style-type: none"> - Monitoring, measurement, analysis & evaluation - Internal audit - Management review
10. Improvement <ul style="list-style-type: none"> - Non-conformity and corrective action - Continual Improvement 	10. Improvement of the InnoMS <ul style="list-style-type: none"> - Identify deviations and establish corrective action - Continual Improvement
	11. Innovation Management Techniques <ul style="list-style-type: none"> - Management of strategic intelligence, Inno thinking, IP, Collaboration and Creativity.



Thank you!



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