Comparing *PMBOK® Guide* 4th Edition, *PMBOK® Guide* 5th Edition, and ISO 21500
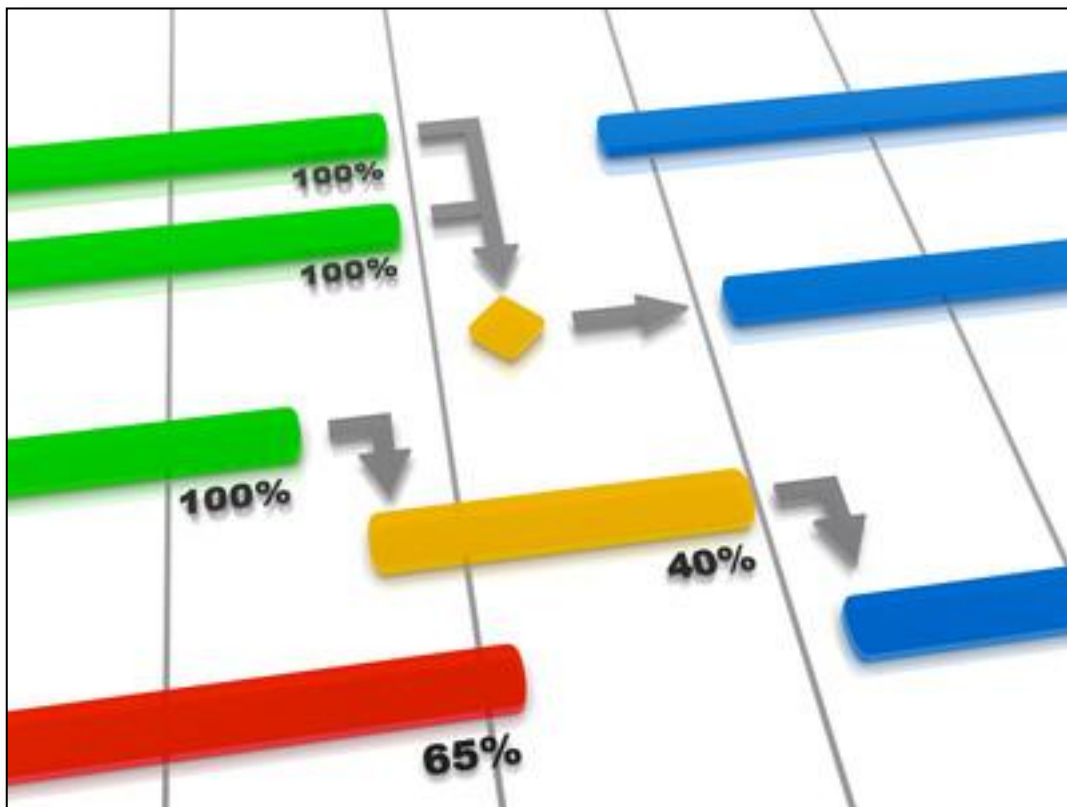

Thierry Labriet, STS

Contents

1   FOREWORD

National and international standards exist and initiated the emergence of project management certifications mostly targeting individuals, rather than organizations.

Despite this orientation, most Project Management standards are process oriented. Therefore, many companies have developed in-house methodologies that are more or less inspired from these standards.

Currently, three major process oriented certification bodies have a dominant and significant influence in Switzerland and Europe:

The Project Management Institute (PMI) and its Project Management Body of Knowledge (PMBOK) guide®.

- The Office of Government Commerce (OGC) and PRINCE2®, published in 1996, having been contributed to by a consortium of some 150 European organizations.
- The Swiss Federal Strategy Unit for IT (FSUIT) the owner of the HERMES method.

The International Project Management Association (IPMA) is not considered here since it is not process but competencies oriented, when considering its certification framework.

In 2006, the British Standard Institute, a member of ISO, has initiated a request toward ISO to work on defining a standard for Project Management.

ISO launched a new Technical Committee to deal with project management: TC 236. This committee involves 37 participating countries and 14 observing countries.

The TC236 secretariat has published guidance on project management: ISO Draft International Standard (DIS) 21500, which is currently at approval stage.

Since the PMBOK® Guide has been approved by ANSI as American National Standards, and ANSI being the TC236 secretariat, some similarities were expected between the PMBOK® Guide and the ISO/DIS 21500 standard.

This white paper aims to highlight the major communalities and differences between the ANSI and the ISO standards, i.e. between the *PMBOK® Guide* and the ISO/DIS 21500 standard.

Both *PMBOK® Guides*, 4th and 5th editions, have been considered and are covered in this white paper.

Disclaimer: Both the ISO/DIS 21500 and *PMBOK® Guide* 5th edition were being approved at the time we wrote this document and minor changes may have been introduced in the final release of the respective documents. In the following document any reference to the ISO standard is related to the Draft International Standard, ISO/DIS 21500 document.

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2   EXECUTIVE SUMMARY

The two releases of the PMBOK® Guide and the ISO 21500 standards are very close. They present a set of processes that have been organized the same way, by project management stage and project management topic.

The ISO standard is 47 pages only and is limited to the introduction of the processes, their inputs and their outputs.

Both PMBOK® Guides describe, through more than 450 pages, the project management processes, their inputs, their outputs and also the associated tools and techniques.

In the chronological order, the ANSI standard came first, with the 4th edition of the PMBOK® Guide. The ISO standard has been approved by the national committees and was released in August 2012. The new edition of the PMBOK® Guide is expected by the end of 2012.

ISO uses most of the PMBOK® Guide 4th processes and introduced minor adaptations: the risk knowledge area has been revisited as well as the human resource management.

The major change is related to stakeholder management; the subject group (aka knowledge area) has been introduced by ISO and it appears as well in the new PMBOK® Guide release. The two processes introduced by ISO in this subject group were two processes of the communication knowledge area of the PMBOK® Guide 4th edition.

ISO processes are more likely oriented towards a cascade approach of the scope definition rather than an iterative approach. Therefore, the ISO standard is perhaps less attractive for Agile oriented organizations.

3   PROCESS ORGANIZATION IN THE STANDARDS

Both standards (ANSI and ISO) are structured into project management stages (project management, not project stages or phases) and project management topics:

	PMBOK® Guide 4th	ISO/DIS 21500	PMBOK® Guide 5th
Stages	5 process groups	5 process groups	5 process groups
Topics	9 knowledge areas	10 subject groups	10 knowledge areas
Processes	42 processes	39 processes	47 processes

NB: Since the PMBOK® Guide 4th came first, we will use the wording "process groups" and "knowledge areas" in this document.

The first noticeable thing is the introduction of a new knowledge area in the DIS and the PMBOK® Guide 5th edition: Stakeholder Management.

	PMBOK® Guide 4th	ISO/DIS 21500	PMBOK® Guide 5th
Process Groups	1. Initiating 2. Planning 3. Executing 4. Monitoring & Controlling 5. Closing	1. Initiating 2. Planning 3. Implementing 4. Controlling 5. Closing	1. Initiating 2. Planning 3. Executing 4. Monitoring & Controlling 5. Closing
Knowledge Areas	1. Integration 2. Scope 3. Time 4. Cost 5. Quality 6. Human Resource 7. Communications 8. Risk 9. Procurement	1. Integration 2. Scope 3. Time 4. Cost 5. Quality 6. Resource 7. Communication 8. Risk 9. Procurement 10. Stakeholder	1. Integration 2. Scope 3. Time 4. Cost 5. Quality 6. Human Resource 7. Communications 8. Risk 9. Procurement 10. Stakeholder

NB: In both PMBOK® Guides, the full name of the knowledge areas follows the pattern <Project <KA> Management>: "Integration" is described by PMI as "Project Integration Management".

The set of processes exposed by the PMBOK® Guide 4th edition is the following:

PMBOK® Guide 4th	Initiating	Planning	Executing	Monitoring & Controlling	Closing
Integration	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Execution	4.4 Monitor and Control Project Work 4.5 Perform Integrated Change Control	4.6 Close Project or Phase
Scope		5.1 Collect Requirements 5.2 Define Scope 5.3 Create WBS		5.4 Verify Scope 5.5 Control Scope	
Time		6.1 Define Activities 6.2 Sequence Activities 6.3 Estimate Activity Resources 6.4 Estimate Activity Durations 6.5 Develop Schedule		6.6 Control Schedule	
Cost		7.1 Estimate Costs 7.2 Determine Budget		7.3 Control Costs	
Quality		8.1 Plan Quality	8.2 Perform Quality Assurance	8.3 Perform Quality Control	
Human Resources		9.1 Develop HR Plan	9.2 Acquire Project Team 9.3 Develop Project Team 9.4 Manage Project Team		
Communi-cations	10.1 Identify Stakeholders	10.2 Plan Communications	10.3 Distribute Information 10.4 Manage Stakeholders Expectations	10.5 Report Performance	
Risk		11.1 Plan Risk Management 11.2 Identify Risks 11.3 Perform Qualitative Risk Analysis 11.4 Perform Quantitative Risks Analysis 11.5 Plan Risk Responses		11.6 Monitor and Control Risks	
Procurement		12.1 Plan Procurements	12.2 Conduct Procurements	12.3 Administer Procurements	12.4 Close Procurements

ISO presents the following set of processes[*]:

ISO 21500 Standard	Initiating	Planning	Implementing	Controlling	Closing
Integration	4.3.2 Develop Project Charter	4.3.3 Develop Project Plans	4.3.4 Direct Project Work	4.3.5 Control Project Work 4.3.6 Control Changes	4.3.7 Close Project Phase or Project 4.3.8 Collect Lessons Learned
Stakeholders	4.3.9 Identify Stakeholders		4.3.10 Manage Stakeholders		
Scope		4.3.11 Define Scope 4.3.12 Create WBS 4.3.13 Define Activities		4.3.14 Control Scope	
Resource	4.3.15 Establish Project Team	4.3.16 Estimate Resources 4.3.17 Define Project Organization	4.3.18 Develop Project Team	4.3.19 Control Resources 4.3.20 Manage Project Team	
Time		4.3.21 Sequence Activities 4.3.22 Estimate Activity Durations 4.3.23 Develop Schedule		4.3.24 Control Schedule	
Cost		4.3.25 Estimate Costs 4.3.26 Develop Budget		4.3.27 Control Costs	
Risk		4.3.28 Identify Risks 4.3.29 Assess Risks	4.3.30 Treat Risks	4.3.31 Control Risks	
Quality		4.3.32 Plan Quality	4.3.33 Perform Quality Assurance	4.3.34 Perform Quality Control	
Procurement		4.3.35 Plan Procurements	4.3.36 Select Suppliers	4.3.37 Administer Contracts	
Communications		4.3.38 Plan Communications	4.3.39 Distribute Information	4.3.40 Manage Communication	

[*] This table is reproduced with the permission of ISO. ISO 25000:2012 can be obtained from any ISO member and from ISO at www.iso.org. Copyright remains with ISO.

The PMBOK® Guide 5th edition introduces the following processes:

PMBOK® Guide 5th	Initiating	Planning	Executing	Monitoring & Controlling	Closing
Integration	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Execution	4.4 Monitor and Control Project Work 4.5 Perform Integrated Change Control	4.6 Close Project or Phase
Scope		5.1 Plan Scope Management 5.2 Collect Requirements 5.3 Define Scope 5.4 Create WBS		5.5 Validate Scope 5.6 Control Scope	
Time		6.1 Plan Schedule Management 6.2 Define Activities 6.3 Sequence Activities 6.4 Estimate Activity Resources 6.5 Estimate Activity Durations 6.6 Develop Schedule		6.7 Control Schedule	
Cost		7.1 Plan Cost Management 7.2 Estimate Costs 7.3 Determine Budget		7.4 Control Costs	
Quality		8.1 Plan Quality Management	8.2 Perform Quality Assurance	8.3 Control Quality	
Human Resources		9.1 Plan HR Management	9.2 Acquire Project Team 9.3 Develop Project Team 9.4 Manage Project Team		
Communi-cations		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Control Communications	
Risk		11.1 Plan Risk Management 11.2 Identify Risks 11.3 Perform Qualitative Risk Analysis 11.4 Perform Quantitative Risks Analysis 11.5 Plan Risk Responses		11.6 Control Risks	
Procurement		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	12.4 Close Procurements
Stakeholder	13.1 Identify Stakeholders	13.2 Plan Stakeholder Management	13.3 Manage Stakeholder Engagement	13.4 Control Stakeholder Management	

4   MAJOR CHANGES ON PROCESSES, IN A NUTSHELL

The PMBOK® Guide 4th edition details 42 processes.

From the PMBOK® Guide 4th, ISO …

… uses 32 processes or direct equivalents,

… revisits 2 processes (Develop HR plan and Acquire Project Team are revisited into Establish Project Team and Define Project Organization)

… merges 2x2 processes into 2 (Perform Qualitative Risk Analysis and Perform Quantitative Risk Analysis are merged into Assess Risks and Distribute Information and Report Performance are merged into Distribute Information)

… does not use 4 processes (Collect Requirements, Verify Scope, Plan Risk Management, Close Procurements)

… introduces 3 processes (Collect Lessons Learned, Control Resources, Manage Communication)

The ISO standard has 39 processes.

The PMBOK® Guide 5th, compared to its predecessor …

… adds 4 processes to plan the management of knowledge areas

… introduces 2 new controlling processes (Control Communications & Control Stakeholder Management)

… merges 2 processes (Distribute Information and Report Performance) into a revisited process (Manage Communications)

… reallocates 2 processes in the new stakeholder knowledge area

This edition of the PMBOK® Guide details 47 processes.

5   DETAILED ANALYSIS

Following the PMBOK® Guide 4th edition structure, the major differences between the three references will be detailed, knowledge area by knowledge area.

Since this structure didn't include the stakeholder knowledge area, it will be detailed at the very end of this document.

Therefore, the analysis will not strictly follow the ISO standard structure.

5.1   PROJECT INTEGRATION MANAGEMENT

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Develop Project Charter	Develop Project Charter	Develop Project Charter
What's new in ISO?	No major addition.		
What's new in the 5th edition?	In addition to the expert judgment, the 5th edition proposes facilitation techniques to build the project charter. These techniques have been introduced by the 5th edition. Typical facilitation techniques are brainstorming, Delphi technique, problem solving, meetings, facilitation, etc.		
Process	Develop Project Management Plan	Develop Project Plans	Develop Project Management Plan
What's new in ISO?	ISO reinforces the distinction between the baselines and the management plans. The Project Management Plan federates the management plans of the different knowledge areas, like the scope management plan, the risk management plan, etc., that are called subsidiary plans. The project plan contains the baselines of the project, in terms of scope, schedule, resources, risks, etc.		
What's new in the 5th edition?	For both frameworks of PMI, the Project Management Plan integrates and consolidates all of the subsidiary management plans and baselines. Thus, the Project Management Plan is made of the two major sections: The subsidiary management plans and the baselines. This is consistent with the previous edition.		

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Direct and Manage Project Execution	Direct Project Work	Direct and Manage Project Execution
What's new in ISO?	Change requests are not an input of the "Direct Project Work" process. ANSI justifies such changes because when the work is being done, teammates may request process adaptations, discover new way to perform, etc. ISO introduces more significantly the issue log in its standard. It is a clear deliverable that flows between processes when it is a component of the project documentation for ANSI. The issue log is put at the same level than the risk register in the ISO standard.		
What's new in the 5th edition?	Meetings (and not facilitation techniques(!?)) are introduced as a technique to manage the project execution. These meetings might trigger the creation of a change request when dealing with scope change proposals, process adaptations, etc.		
Process	Monitor and Control Project Work	Control Project Work	Monitor and Control Project Work
What's new in ISO?	For ISO, this process is in charge of the transformation of progress data into progress reports and forecasts. In the ANSI standard, this transformation occurs in the "Report Performance" process, which is also a controlling process. ISO introduces also "Project Handover Reports" but doesn't detail its use.		
What's new in the 5th edition?	The new edition of the ANSI standard goes into the same direction than ISO: The forecasts and the work performance information are analyzed in this process to produce performance reports.		
Process	Perform Integrated Change Control	Control Changes	Perform Integrated Change Control
What's new in ISO?	ISO uses more formally a change register, when it is a de facto document in the ANSI standard.		
What's new in the 5th edition?	The change register is also more formal, with the name of a change log. "Change Control Tools" are introduced by the 5th edition in order to facilitate configuration and change management.		

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Close Project or Phase	Close Project Phase or Project	Close Project or Phase

What's new in ISO?	The closure report and released resources are explicit outputs of the ISO process, which is a clear improvement. ISO uses the project handover reports and certificates as formal inputs to confirm the well production of expected deliverables with the expected level of quality.

What's new in the 5th edition?	The 5th edition doesn't confirm the explicit use of the closure report and released resources. It stays very close to the 4th edition with the addition of analytical techniques and meetings as tools and techniques.

	PMBOK® Guide 4th	ISO/DIS 21500	PMBOK® Guide 5th
Process		Collect Lessons Learned	

What's new in ISO?	This process has been introduced by ISO. It is a clear sign of the importance of knowledge management in learning organization even though it is not managed as a new knowledge area, as expected by many contributors. This process involves many situational outputs of other processes to produce a lessons learned document.

What's new in the 5th edition?	This process has not been implemented in the ANSI standard, yet. On the other hand, many process outputs now include "Lessons Learned Documentation" in the "Organizational Process Assets Updates" general deliverable.

5.2   PROJECT SCOPE MANAGEMENT

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process			Plan Scope Management

What's new in the 5th edition?	The new edition of the ANSI standard implements systematically a management plan for each knowledge area. It was an unclear area in the previous edition: The scope management plan was not covered in any process but mentioned as a subsidiary plan of the project management plan, for instance. This new process has major outputs: The scope management plan that details how the scope will be managed and what templates will be used. The requirement management plan is also very interesting since it details how the requirements will be managed from the start until the end and how the configuration management activities will be handled.

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Collect Requirements		Collect Requirements

What's new in the 5th edition?	The 5th edition has removed the inconsistent output of the "Collect Requirements" process which is the requirements management plan.

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Define Scope	Define Scope	Define Scope

What's new in ISO?	ISO puts in this process the creation of the requirements documentation and makes an interesting link between the scope and its contribution to the strategic goals of the company.
What's new in the 5th edition?	No major addition.

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Create WBS	Create WBS	Create WBS
What's new in ISO?	No major addition.		
What's new in the 5th edition?	Whereas ISO shows the WBS and its dictionary as the sole outputs of the process, the new edition of the ANSI standard keeps the term of scope baseline. This is consistent with other knowledge areas: For instance, regarding time, the planning processes issue a schedule baseline, not one specific instance of such a baseline like a Gantt, a Pert, etc. The 4th edition had both outputs: A scope baseline, the WBS and its dictionary which was somehow redundant.		
Process		Define Activities	
What's new in ISO?	This process has been moved by ISO in scope management. Detailed changes are showed in the next knowledge area.		
Process	Verify Scope		Validate Scope
What's new in the 5th edition?	The 5th edition introduces an interesting points regarding the validation (instead of verification) of the scope: The acceptance of the deliverable is not made just upon the scope baseline but also on work performance data that includes the degree of compliance with requirements, the number of nonconformities and the severity of the nonconformities. This involves the validation to be made using group decision-making techniques.		
Process	Control Scope	Control Scope	Control Scope
What's new in ISO?	No major addition.		
What's new in the 5th edition?	No major addition.		

5.3   PROJECT TIME MANAGEMENT

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process			Plan Schedule Management
What's new in the 5th edition?	This new process details how time-related activities will be managed through the planning, the execution, the control and the closure of the project or phase.		
Process	Define Activities	Define Activities	Define Activities
What's new in ISO?	Except the fact this process is listed in the scope subject group, there is no major change compared to the ANSI standard.		
What's new in the 5th edition?	No major addition.		
Process	Sequence Activities	Sequence Activities	Sequence Activities
What's new in ISO?	No major addition.		
What's new in the 5th edition?	No major addition.		
Process	Estimate Activity Resources	Estimate Resources	Estimate Activity Resources
What's new in ISO?	ISO has moved this process in the Resource subject group. The process "Estimate Resources" deals with all kind of resources (like the ANSI standard) but since ISO put it in the Resource subject group, this group couldn't be "HR only" anymore.		
What's new in the 5th edition?	Activity cost estimate and risk register have been added in the list of inputs of the 4th edition since risks and costs may impact resource selection.		

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Estimate Activity Durations	Estimate Activity Durations	Estimate Activity Durations
What's new in ISO?	No major addition.		
What's new in the 5th edition?	The new edition of the ANSI standard adds the risk register as an input to estimating activity durations. This is interesting since there is a balance to find between 1) identifying and managing risks as such and removing uncertainty from the estimates and 2) keeping minor uncertainties in the responsibility of the team member, and therefore in the duration estimate, because the amount at stake is far minor than the cost of managing the risk.		
Process	Develop Schedule	Develop Schedule	Develop Schedule
What's new in ISO?	ISO introduces schedule constraints as an input of the schedule development which is making sense: Such information might impose deadlines (constrained milestones) to the schedule development.		
What's new in the 5th edition?	The figure 6-17 related to the Critical Path Method gives a better view on how to compute early starts and finishes of the activities through the network diagram, according to their dependencies. It also depicts more in-depth the Critical Chain Method that is more and more used in project management. A new technique of resource optimization has been added: Resource Smoothing has the same intend that Resource Leveling except that it is kept within the activity float, so the project critical path is not changed.		
Process	Control Schedule	Control Schedule	Control Schedule
What's new in ISO?	ISO, in the process description, puts the emphasis on the necessity to produce schedule forecasts, in order to trigger change requests, if required.		
What's new in the 5th edition?	The new edition adds the schedule forecasts as outputs of this controlling process.		

5.4   PROJECT COST MANAGEMENT

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process			Plan Cost Management

What's new in the 5th edition?	Like other management plan, this one has been added to cover the cost area. In the cost management plan are defined the control thresholds and the rules to be applied when using performance measures like EVM does.

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Estimate Costs	Estimate Costs	Estimate Costs

What's new in ISO?	No major addition.

What's new in the 5th edition?	No major addition. There is a minor point regarding weighted average of cost estimates: In addition to the PERT estimates, the new ANSI standard present a simple average (C+M+P)/3.

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Determine Budget	Develop Budget	Determine Budget

What's new in ISO?	The ISO standard doesn't show evidence that the determined budget is time based and can be used to determine funding requirements.

What's new in the 5th edition?	The new edition of the ANSI standard clarifies the inclusion of the contingency reserve in the cost baseline and the exclusion of the management reserve. This last reserve is part of the overall budget and the funding requirements. Regarding the contingency reserve, a new figure shows the understanding of PMI: An activity level and an overall contingency reserve are shown. This might indicate that risks and their associated reserve are managed at the work package level, not necessarily at the activity level.

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Control Costs	Control Costs	Control Costs

What's new in ISO?	No major addition.

What's new in the 5th edition?	The 5th edition indicates reserve analysis as a new technique. This answers the needs of project managers managing projects by risks.

5.5 PROJECT QUALITY MANAGEMENT

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Plan Quality	Plan Quality	Plan Quality Management
What's new in ISO?	ISO indicates the quality plan as an output of this process. This plan is a set of documents ensuring that the quality standards will be met. It seems that this covers the multiple outputs of the ANSI standard (quality metrics, quality checklists, process improvement plan, etc.). The quality management plan refers to the quality policy set by the permanent organization (or derived from it).		
What's new in the 5th edition?	The new edition introduces new tools ("Seven basics quality tools": cause & effect diagrams, flowcharts, check sheets, Pareto diagrams, histograms, control charts and scatter diagrams) and removed flowcharting and proprietary quality management methodologies.		
Process	Perform Quality Assurance	Perform Quality Assurance	Perform Quality Assurance
What's new in ISO?	In the ISO standard, quality assurance is mostly concerned with the assurance that quality requirements are communicated and understood, and that established procedures are used. It says also that "quality assurance activities ensure that […] product quality conform to project quality requirements and standards" which is a concern mostly address in the Quality Control process of the ANSI standard.		
What's new in the 5th edition?	Quality Management and Control Tools are more detailed than in the previous edition.		
Process	Perform Quality Control	Perform Quality Control	Perform Quality Control
What's new in ISO?	Formal inspection reports are mentioned as key outputs.		
What's new in the 5th edition?	No major addition.		

5.6   PROJECT HUMAN RESOURCE MANAGEMENT

This knowledge area is presented differently in the two standards and we need to take few minutes to understand the two points of view.

In both ANSI standards, the first process is "Develop HR Plan" (or "Plan HR Management" in the 5th edition). This process is in the planning process group. Other HR processes are execution processes: "Acquire Project Team", "Develop Project Team" and "Manage Project Team".

In the ISO standard, we can see that there is a first process "Establish Project Team" that appears in the Initiating process group.

Then follow the planning processes "Estimate Resources" and "Define Project Organization".

The "Develop Project Team" is an execution process and we have two controlling processes "Control Resources and "Manage Project Team".

Gosh! The two standards have a completely different point of views! Not really!

ISO puts the process "Establish Project Team" in the Initiating process group because it is seen as a process that is performed continuously throughout the project.

ISO doesn't mean that the team is built first, then resources are estimated and last the team is organized.

When one looks at the inputs and outputs of this process, it is very close to the ANSI standard point of view and corresponds to the "Acquire Project Team" process.

Let's represent this graphically:

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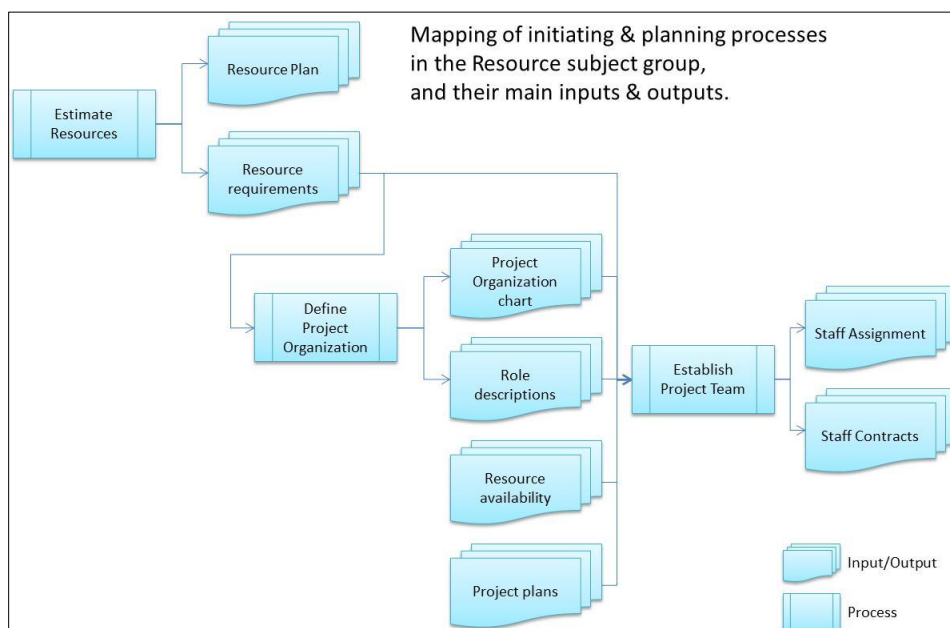
ISO answers this way to a concern: the project needs a team to perform the initiating and planning activities. So this process can be performed iteratively, and the main team set-up occurs in the planning.

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Develop HR Plan	Define Project Organization	Plan HR Management
What's new in ISO?	The "Define Project Organization" process aims to secure commitments from the permanent organization (team leaders for instance). Like the "Develop HR Plan", its objective is also to define the roles and responsibilities in the project, and to detail how resources will be acquired, how they will be rewarded and released.		
What's new in the 5th edition?	No major addition.		
Process	Acquire Project Team	Establish Project Team	Acquire Project Team
What's new in ISO?	The ISO standard introduces the idea of staff contracts in addition to the staff assignments, which is interesting since, in many organizations, there is a more or less formal agreement between the functional managers and the project management team.		
What's new in the 5th edition?	The new release of the ANSI standard introduces a new technique to acquire the project team: Multi-criteria decision analysis uses more objective decision criteria like the cost, the availability, the experience, the knowledge, etc.		
Process	Develop Project Team	Develop Project Team	Develop Project Team
What's new in ISO?	No major addition.		
What's new in the 5th edition?	No major addition.		

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Manage Project Team	Manage Project Team	Manage Project Team
What's new in ISO?	ISO adds a new output of this process: Staff Performance and staff Appraisals. The distinction with Team Performance and Team Appraisals that are output of the "Develop Project Team" is not crystal clear but ISO presents such outputs as inputs for the organizational personnel appraisals and lessons learned.		
What's new in the 5th edition?	No major addition.		
Process		Control Resources	
What's new in ISO?	With this new process ISO shows the importance of controlling resource assignments and allocations, the necessity to anticipate resource shortages or shifts and to address resource conflicts in availability.		

5.7 PROJECT COMMUNICATIONS MANAGEMENT

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Identify Stakeholders		
What's new in ISO?	This process has been moved to the subject group "Stakeholders". See below.		
What's new in the 5th edition?	This process has been moved to the newly created knowledge area "Project Stakeholder Management". See below.		
Process	Plan Communications	Plan Communications	Plan Communications Management
What's new in ISO?	ISO identifies clearly an input to this process, "Role descriptions", in order to build the communication plan. This was implicit in ANSI standard since the Communication Management Plan includes responsibilities.		
What's new in the 5th edition?	No major addition.		
Process	Distribute Information + Report Performance	Distribute Information	Manage Communications
What's new in ISO?	The processes "Report Performance" and "Distribute Information" have been merged into "Distribute Information". This process has the same inputs as "Report Performance" i.e. work performance information and forecasts. It aims to make the required information available to stakeholders (this is the same aim as the process "Distribute Information"). This process also manages information distribution from stakeholders to the project in order to provide inputs to other processes (f.i. risk management).		
What's new in the 5th edition?	The new release of the ANSI standard also merges the two 4th edition processes. Tools and techniques presented by PMI include performance reporting that was initially in the "Report Performance" process. This revisited process goes beyond the distribution of relevant information and seeks to ensure that the information being communicated to project stakeholders has been received and understood. It also provides opportunities for stakeholders to make further information requests.		

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process		Manage Communications	Control Communications
What's new in ISO?	The purpose of this new process is to identify and resolve communications issues, and to ensure communication needs are satisfied. The outputs are accurate and timely information (resolved communications issues) and change requests, mainly on the communication plan.		
What's new in the 5th edition?	The 5th edition of the ANSI standard is close to the ISO considerations.		

5.8   PROJECT RISK MANAGEMENT

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Plan Risk Management		Plan Risk Management
What's new in the 5th edition?	The 5th edition has improved the list of tools and techniques for planning risk management. A non-exhaustive list of techniques is presented as well as the most important stakeholders who can provide their expert judgment. The list of inputs has been revisited also to improve consistency.		
Process	Identify Risks	Identify Risks	Identify Risks
What's new in ISO?	No major addition.		
What's new in the 5th edition?	No major addition.		
Process	Perform Qualitative Risk Analysis	Assess Risks	Perform Qualitative Risk Analysis
What's new in ISO?	No major addition.		
What's new in the 5th edition?	No major addition.		
Process	Perform Quantitative Risk Analysis		Perform Quantitative Risk Analysis
What's new in ISO?	This interesting ANSI process has not been explicitly described by ISO. It may be considered as included in "Assess Risks" but the ANSI standard delivers a real added-value by describing more in-depth the statistical considerations and methods, and by delivering interesting outcomes like a probabilistic analysis of the project.		
What's new in the 5th edition?	No major addition.		

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Plan Risk Responses	Treat Risks	Plan Risks Responses
What's new in ISO?	No major addition.		
What's new in the 5th edition?	The 5th edition removed an output of this process. "Risk-related Contract Decisions" is not anymore an outcome of this process. Such information is already carried through the updates on the procurement management plan which is an element of the Project Management Plan.		
Process	Monitor and Control Risks	Control Risks	Control Risks
What's new in ISO?	No major addition.		
What's new in the 5th edition?	No major addition.		

5.9   PROJECT PROCUREMENT MANAGEMENT

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Plan Procurements	Plan Procurements	Plan Procurement Management

What's new in ISO?	ISO added In-house capacity and capability to the list of inputs. This, indeed, might influence a lot the make-or-buy analysis, when compared to the resource requirements. Existing contracts are also considered as an input by ISO.
What's new in the 5th edition?	The main change introduces by the 5th edition is the addition of "Market Research" and "Meetings" as tools and techniques, and the removal of "Contract Types". Contract types are now considered as inputs to this process, included in the "Organizational Process Assets".

	PMBOK® Guide 4th	ISO/DIS 21500	PMBOK® Guide 5th
Process	Conduct Procurements	Select Suppliers	Conduct Procurements

What's new in ISO?	ISO states more formally that three main activities are covered by this process: 1) Obtaining supplier responses 2) Supplier selection 3) Negotiation prior to agree on contract conditions
What's new in the 5th edition?	The PMBOK® Guide 5th edition changed few tools and techniques: "Internet Search" has been removed (it may be included into the general "Advertising" technique) and "Analytical Techniques" have been introduced.

	PMBOK® Guide 4th	ISO/DIS 21500	PMBOK® Guide 5th
Process	Administer Procurements	Administer Contracts	Control Procurements

What's new in ISO?	The ISO standard doesn't detail two major concerns that are well highlighted in the ANSI standard: Payments and Claims administration.
What's new in the 5th edition?	No major addition.

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process	Close Procurements		Close Procurements
What's new in ISO?	ISO considers this activity being part of the integration process "Close Project Phase or Project". This process identified "Completed Contracts" as an output.		
What's new in the 5th edition?	No major addition.		

5.10 PROJECT STAKEHOLDER MANAGEMENT

	PMBOK® Guide 4th processes	ISO/DIS 21500 processes	PMBOK® Guide 5th processes
Process			Plan Stakeholder Management
What's new in the 5th edition?	This new process introduces a new concern regarding stakeholder engagement. It details how are analyzed the current and desired levels of engagement. It highlights the fact that levels of engagement may change according to the project situation and timeframe. Alongside the levels of engagement, this process identify the interrelations between stakeholders		
Process	Manage Stakeholders Expectations	Manage Stakeholders	Manage Stakeholder Engagement
What's new in ISO?	No major addition.		
What's new in the 5th edition?	No major addition.		
Process			Control Stakeholder Management
What's new in the 5th edition?	This new process ensures comprehensive identification and listing of new stakeholders, reassessment of current stakeholders and removal of stakeholders no longer involved in the project. It monitors the changes on the stakeholder interrelations and controls their engagement, in order to adapt the stakeholder management strategy if needed.		

6   CONCLUSION FOR THE SPECIALISTS

Throughout this review, we see the most important addition of the ISO standard being the addition of a formal knowledge are to deal with stakeholders.

A step towards the management of knowledge has been made in the ISO standard without becoming a knowledge area by itself.

The PMBOK® Guide 5th edition incorporate also this major change. On the other hand, the new version of the PMBOK® Guide didn't reassign processes in different knowledge areas like ISO did.

The major addition of the PMBOK® Guide 5th Edition compared to its predecessor is the fact that, from now one, a knowledge area always starts with the concerned subsidiary management plan.

Many project managers expected to see the emergence of iterative approaches in decomposing the scope and executing the project: Both standards are very "cascade approach" oriented.

Maybe, the most important point is the fact that current trainings don't need a tremendous revisit to be consistent with the new PMBOK® Guide. Simplification and consistency concerns drove this new edition, together with the new knowledge area.

7   MANAGEMENT CONCLUSION

The important consistency between the ANSI and the ISO standards will definitively help the profession.

PMI certifications will continue to promote structured project managers and these project managers (or associates) will definitively help a lot of organizations to align their project management processes toward ISO recommendation.

This mutual contribution is likely to continue since a new technical committee has been set-up to deal with program and portfolio management. And the organization of this new committee is the same than the committee producing the ISO/DIS 21500 standard.

This might also lead PMI to certify portfolio managers in the future…

PMI confirms its leading position to certify program managers, project managers and associates who will feel "at home" in ISO oriented organizations.

In the future, if ISO/DIS 21500 becomes the basis of a certification, there will be an advantage for companies to have PMI certified project and program managers onboard.