PRODUCT DESCRIPTIONS

Product Descriptions (PDs) describe each of the products identified on the PBS and should be produced to the same level of decomposition. In the same way that a product is decomposed on the PBS, a product is described by a hierarchy of PDs.

They describe the purpose, form, components, and derivation of each product and lists quality criteria which apply to it together with the method(s) which are to be used to measure the product against its defined quality criteria.

The major components of the Product Description and their function.

PURPOSE	This states why the product is being produced. If the purpose cannot be stated then the inclusion of the product in the project should be questioned.
COMPOSITION	This describes the component parts which together constitute this product and should be consistent with the product breakdown structure.
FORM	The physical form that the product will take. This may refer to standards, common forms or formats, models, software tools, etc.
DERIVATION	This will identify products missed by the product breakdown structure and the product flow diagrams ensuring that all products have been captured, will identify external products and incorrect sequencing or dependencies in the product flow diagram.

QUALITY CRITERIA	This states the criteria by which the product will be measured upon completion. The criteria must be testable and measurable. By stating the quality requirements during the planning process, everyone can be clear about what is required, especially the producer, and quality checking can be undertaken from a common understanding.
QUALITY METHOD	This states the quality control method or methods to be used for checking the product against its quality criteria.
COMPETENCIES	*This identifies the skills, knowledge and experience necessary to produce and control the quality of the product.* *It is an* ***optional*** *element of the product description.*

EXAMPLE PRODUCT DESCRIPTION

PRODUCT DESCRIPTION

Author: RGW

Date 19/10/2020

Product Title: Building Shell

Product Number: 5200 Version 1

PURPOSE	The main framework of the property.
COMPOSITION	Walls, Roof, Glazed Windows, Doors.
FORM	As Specified in the Architect's plan.
DERIVATION	By builders from the Architect's plan with clarification if necessary, by owners.
QUALITY CRITERIA	Have Architect's plans been adhered to? Have Building regulations been met? Are owners satisfied with the result?
QUALITY METHOD	Inspection by Building Manager and Owners Building Inspector's Survey
COMPETENCIES	*Particular skills or qualifications needed by participants in the delivery of the product*

BENEFITS OF PRODUCT BASED PLANNING

- *Focus* Focuses the attention on the end goal rather than the means of getting there;

- *Project Definition* Ensures the scope of the project is correct and understood by all the participants;

- *Communication* Product based planning communicates clearly the requirements of the project at all levels, from the Promoter who owns the project to the teams who are to produce the products;

- *Product Identification* Ensures that **all** products required are identified including Management and Quality Products as well as Technical Products;

- *Product Description* Ensures that all interested parties have the same view of the requirements, eliminating the likelyhood of products being produced at the wrong level of detail, or in the wrong format;

- *Activity Derivation* Ensures that the activities derived are appropriate for a particular project and based upon the required products. NB An activity **must** produce a product, otherwise it has no purpose;

- *Control* Enables control by means of a measurable product completion. This is especially beneficial when staff are working remotely or external resources are involved in product production;

- *Interfaces* Identifies those products which are being produced externally to the project and those products required for other projects. This identifies inter-project interfaces which can then be managed;

- *Impact Analysis* Identification of the impact of change on a project's products via the Product Breakdown Structure, Product Flow Diagram and Product Descriptions;

- *Quality* Product Descriptions containing the quality expected and the Quality Control method to be used for checking this criteria will ensure that the quality will be attained;

- *Motivation* By providing clear objectives via the Product Descriptions, individual Product Team members will become better motivated and, using the specified Quality criteria, will be better able to assess their own performance;

- *Performance* The Product Descriptions with their specified Quality Criteria and Method, provide a vehicle for managers in the objective assessment of personnel performance. This is particularly valuable in a Matrix Management environment, where the line manager or assessor may not be involved with the day-to-day work of the individual whose work is being assessed;

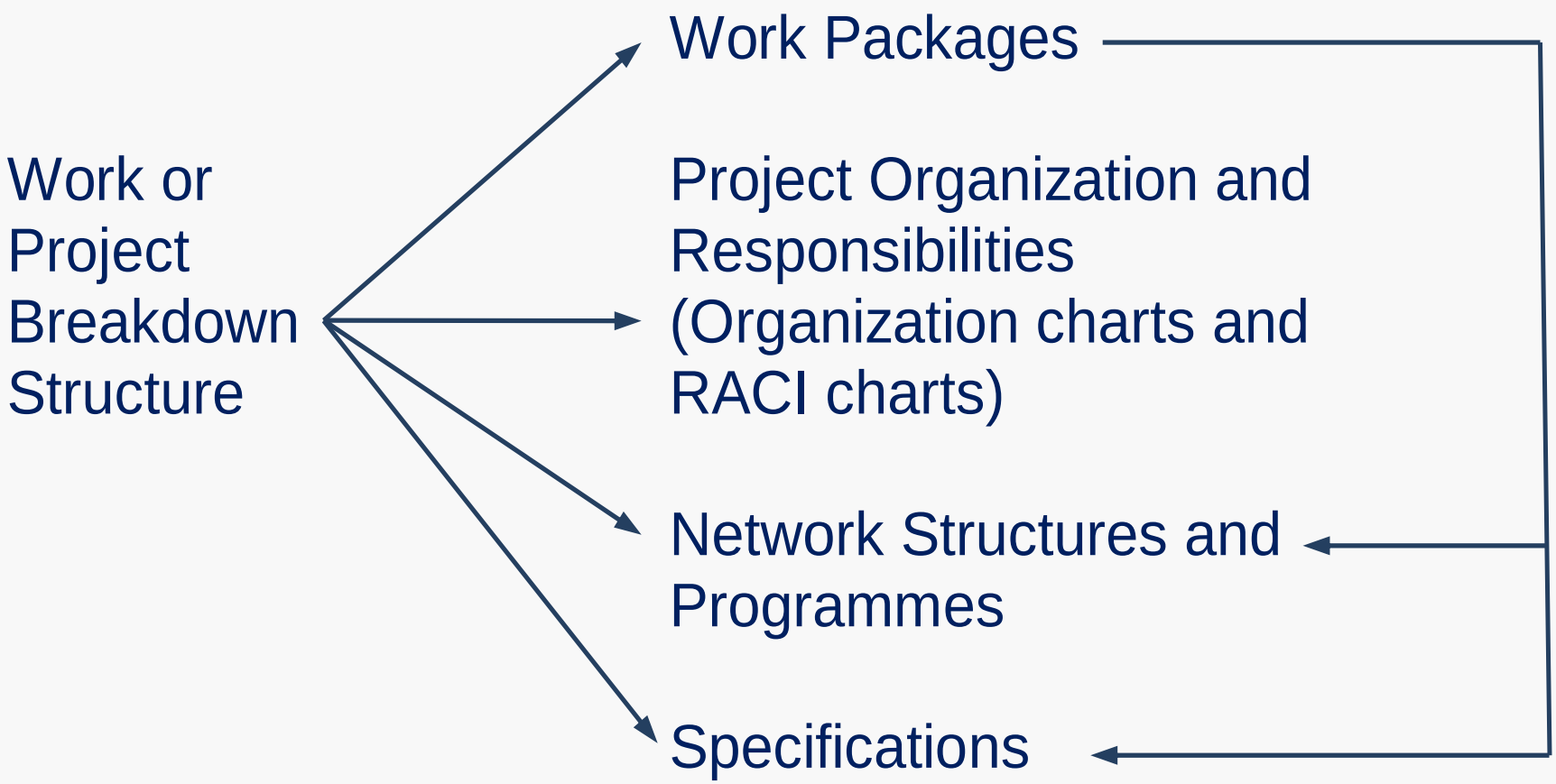
- *Selection & Training* Product Descriptions provide the information necessary to identify the skills, knowledge and experience required of the producer and can, therefore, be used as a basis for Product Team selection and for the identification of training needs;

- *Improved Estimating* Estimates can be produced based upon a detailed description of the product to be produced including the level of quality required;

- *History* Actual resource usage can be more easily obtained based upon measurable completion. This improved historic information will assist in providing more accurate estimates for future projects;

- *Configuration Management* The products of the techniques can be used to assist in Configuration Management and change control of the project's products.

The links between Project Breakdown Structures (PBS and WBS) and other elements of Project Management



THE PREPARATION OF SPECIFICATIONS

SPECIFICATION

A statement of the attributes of a product, process or service (BS 7373; 1991, revised in 2005).

Purpose is to convey information.

Clarity - Requirements should be clearly stated so that conformity can be checked.

Double or hidden meanings should be eliminated.

Ambiguity should be eliminated

Specifications are used by a variety of people. The group for whom the document is to be written should be a major consideration.

Technical terms should be referenced or defined and the final text should be capable of being included in a legally binding contract.

Should: for guidance where there is no requirement or compliance requested.

Shall: when a requirement to comply with the contents of a clause is intended.

(Avoid *"must"* and *"will"* - by convention these are confined to regulatory and statutory requirements.)

TERMINOLOGY - should be consistent with the specialist requirements of the subject and the comprehension of the user. A specification for users of a particular profession would be expected to contain the terminology associated with the profession.

A similar specification written to be used by the consumer or user of a product should avoid highly technical terminology.

Terminology should be consistent.

Synonyms should be avoided. If the specification is part of a series it should be consistent with other specifications.

Acronyms should not be used, but if needed should be preceded in the text by the full term the first time that it occurs.

MANAGEMENT OF SPECIFICATIONS

Policy

1. Confidentiality and security.
2. Format
3. Copyright
4. Authorization

Security

1. Patent protection.
2. Financial confidentiality.
3. National/organisational security, including the protection of customer information.
4. Storage of specifications and security of storage.

Management

1. Duplication, access and storage
2. Related documents
3. Drafting procedures

Access to specifications

- need to be readily available when requested so that they can be used

- require a code and title and need to be indexed, so that they can be stored and located in an archive or filing system.

Review of specifications

- users need to be aware of changes. Location of all copies needs to be known in order to incorporate the changes.

- reviewing needs to take place at regular intervals.

- procedures are needed for withdrawing a specification.

SUGGESTED ORDER OF SPECIFICATION PRESENTATION (taken from BS 7373 2001)

1. Identification : title, reference number, issue number, date.

2. Circulation : the distribution list

3. Contents list : guide to layout, parts, clauses, illustrations, annexes and appendices.

4. Foreword : the reason for writing the specification.

5. Introduction : describes the content in general and technical aspects of objectives.

6. Scope : range of objectives or content or limitations of these eg the specification may be relevant in only one country.

7. References : a statement regarding reference documents

8. Definitions : terms used with meanings special to the text.

9. Main Body of the Specification Requirements/guidance/methods/elements : the main body of the specification.

10. Appendices : examples, etc..

11. Index : cross references.

12. References and Bibliography : to national, European, international standards or other internal company specifications.

SOME SPECIFICATION TYPES

Target specification describes the primary purpose of an item and gives guidance concerning e.g. style, appearance, performance, packaging, reliability etc..

Functional specification describes in detail the characteristics of a product.

Material specification describes the materials or components used.

Acceptance specification describes the criteria for acceptance of the product.

Inspection specification describes the method of inspection and if necessary consequent action.

Process specification describes the method of assembly or procedure.

Test specification describes in detail the methods of conducting tests including the criteria for assessing the result.

Handling and packing specification describes in detail those requirements necessary to ensure that the product can be transported during and after manufacture with adequate protection from the environment.

Installation specification describes in detail the procedure for installing the product including, if necessary, the procedure for unpacking and preparation prior to installation.

Operational specification is the document that describes in detail the method of bringing into use, operating, controlling and adjusting the product.

Descriptive specification is a statement of the attributes of a product which enables prospective users to establish its fitness for use.

Maintenance specification describes the requirements of corrective and preventative procedures to maintain the product during its useful life.

Disposal specification describes the method and precautions to be observed in discarding or otherwise disposing of the product when it has failed or is no longer required for any reason.