

إدارة المشروعات الهندسية

Engineering Project Management

الفصل الخامس: هات 213

Lecture 1-2: Project Planning

TextBook:

Project Management for Telecommunication Managers

Project Planning

- ▶ Why?
 - The planning and the work are performed by people, *نخطط شغل الناس*
 - Projects are constrained by some limited resources *المشروع ربيع لها حدود*
- ▶ Therefore we have to plan and manage very carefully to meet the project objectives.
- ▶ Meeting scope, time and budget then are the three main requirements of almost every project. *الاصول الثلاثة*

PROJECT SCOPE

ايشية وصف

- ▶ Project scope is the description of what the project will produce. المشروع يصف
- ▶ The steps are as follows:
 1. Great Idea فكرة حلوة
 2. Project Charter رسم المشروع
 3. Scope Description وصف المجال
 4. Scope Management Plan خطة إدارة المجال
 5. Work Breakdown Structure. آلية الشغل
- ▶ Once all of these steps have been completed, the team will have a solid description of the scope. This can then be used to determine the project budget, project resource requirements, and the timelines.

1. GREAT IDEA

- ▶ Initially someone has a great idea. The idea is either a wonderful new opportunity, or a solution for a problem.
فرصت جدیدہ حل مشکل
- ▶ The company should have a process for assessing this idea, to determine how far it is worth taking it.
- ▶ This is done in the initiation phase of the project.
- ▶ Company may has a defined process for project acceptance.
- ▶ So the team preparing the “idea” documentation should build as solid a business rationale as possible to maximize the acceptance probability.

2. PROJECT CHARTER

وصف عالي الدقة

- ▶ The Charter is a very high level description of the project. Written by the project initiator.
- ▶ It should be only 1–3 pages, and it should contain:
 - a description of the project and the product to be produced,
المشروع للمنتج
 - the project objectives, → أهداف
 - some business rationale, → منطق عمل
 - The budget expectations, → توقعات الميزانية
 - what's included in the project, what's not included,
 - The assumptions, and information known about project risks, → وثقيل بينتهدف المشروع ولا يتضمن ومعلومات عند الخطأ طر
 - and maybe some info about the team or required skills. → معلومات عن الفريق والمهارات المطلوبة

Project charter cont.

مقبول

الرأي

- ▶ Project charter must be approved by the sponsor and when done the Project manager (PM) is authorized to expend resources and recruit a team.
 ↓
لـ المراجعة غير توسيع الموارد والموظفين
- ▶ The Charter is final once the PM and the sponsor sign off. But this does not mean that the scope will not change.
- ▶ The project scope is described in the scope statement. The scope statement is much more detailed than the Charter.
- ▶ The Project Manager will develop the detailed and accurate budget with the project team after the Work Breakdown Structure has been completed.
- ▶ Example Project charter Page 54 (PM for Telecomm. Managers)

3. SCOPE DESCRIPTION

- ▶ The project Scope Statement should contain at least the following information: احتياج العمل
- ▶ **Business Need:** This description is based on the information in the Charter, but further details can be included if available. The business need should be expressed as a goal or as a problem.
- ▶ **Project Justification:** State the reason that this project should be undertaken. The project justification provides rational to justify the expenditure, and to justify the undertaking of this project rather than other projects. تبرير المشروع
- ▶ **product description:** provides a brief narrative description of the 'product' (which is the solution to the business need identified above). هدف المشروع
- ▶ to the business need identified above).

Scope Description cont. داجازات المشروع

- ▶ **Project Deliverables:** The Scope Statement must list the major tangible components of the solution that must be provided in order for the project to be considered complete.
- ▶ **Included/Not Included:** The Scope Statement should clearly describe the items that will be included in the product, and the project. At a minimum, this should be an itemized list. The statement should also specify what will *not be included in the project*.

ملاحظات

Project Cost Objectives:

- ▶ Every objective specified should be **S.M.A.R.T.**

مشخص Specific : what exactly is included and what not..

قابل سنجش Measurable : able to measure the achievement

ممکن Attainable : can be achieved if everyone works hard,

واقعی Realistic : some things can be attainable, yet not realistic.

وقت محدود Time bound : define a start time and a completion time for each objective.

- ▶ **Project Schedule Objectives**: In the Scope Statement the team should list the major milestones that will be used to measure the success of the project. For each of these, a timeframe should be specified.

لایم لکھ مراحل و وقت محدود

Project Quality Objectives:

- ▶ In the scope statement the initial Quality Objectives should be specified, for the project itself and for the high level deliverables.

Project Constraints: All projects have constraints, and it is important to identify these early, and to make everyone aware of them. قيود المشروع لازم نحدد ا لعيود من جاري و الكل يعرف كرتها

Project Assumptions and Risks: The assumptions should identify significant factors that for planning purposes have been assumed to be real and/or true. Any known project risks should also be listed in the scope statement, توقعيات المشروع والمخاطر

Success Measures:

معايير

- ▶ The criteria to be used to determine and measure project success should be described. Also included is information on when the measures will be taken, and possibly how, or by whom.
- ▶ Example scope statement (page 64 of the Textbook).

4. SCOPE MANAGEMENT PLAN

- ▶ In this statement we describe how the scope will be managed and controlled. المجال نوصف مديرتكم
- ▶ We will ensure that the full project and product scope are defined and managed by creating the Work Breakdown Structure, which we describe next, and by monitoring and controlling the activities. المشروع نضمن اطمئنان نعرف وختار إنشاء نسجيل ننظم العمليات
- ▶ A change management process is also required. There are ideas for changes and inclusions in every defined project (there may result from errors, opportunities or unavailable deliverables from other sections.