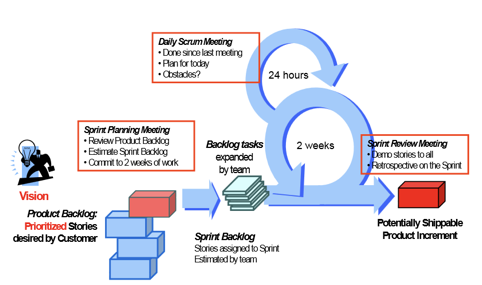
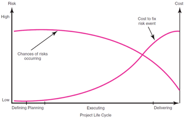
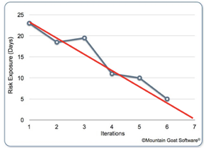
**Team types**Traditional•共同理解和目的•相互商定的运营原则•相互依存 - 都为团队的利益•区分任务与流程Self-directed 整个团队负责整个产品或流程•团队计划和执行工作,监督和管理•协调人帮助团队开始并保持正常运作**Tuckman’s Four Phase Model**: Forming stage定位•识别边界[人际关系与任务]•建立依赖关系[团队领导/团队成员/标准团体规范]Storming stage•冲突围绕人际关系问题的极化,对任务的情绪•抵制群体影响和任务要求Norming stage克服阻力集体感和凝聚力发展•制定新标准规范•采用新角色•表达个人意见Performing stage人际结构成为任务活动的工具•角色变得灵活和有效/集团能量被引入任务•已解决结构化问题•结构支持任务性能**Belbin’s Team Roles**团队角色不是人格类型/而是特征集群People Orientated:•Coordinator 大局自信稳定识别他人的能力;擅长delegation,clarifies决策Team Worker保持团队合作倾听者帮助人们理解unnoticeable因为不会偏袒所以无法决定Resource Investigator专注于团队之外 Action Orientated Shaper 任务集中于高动力，热衷于“赢”，致力于实现目标•Implementer将想法变为行动;高效自律，准时交货;忠诚Completer Finisher完美主义者Thought OrientatedPlant 创意Monitor Evaluator公平合理critical,慢**Benn and Sheat’s Group Roles(用于团建)**:TaskRoles: those centred on the taskPersonalRoles: personal / social DysfunctionalRoles: dysfunctional / individualistic, 确定团建阶段&该阶段有帮助的角色,培养必要和缺失角色的能力,成员的角色灵活性将提高绩效,识别dysfunctional Role, try eliminate the behaviour;Very important-行为具有破坏性.Not necessary-拥有所有角色**People skills**一套技能使人们能够与他人相处有效交流思想解决冲突实现个人/业务目标:Communication:Understanding how people communicate/ Expressing your thoughts and feelings clearly/ Speaking up/ Asking for and giving feedback•Collaboration•Development and maintenance of productive relationships•Leadership•Motivation•Influencing:劝说表达/积极倾听/多视角/探究/信任Effective decision-making:目标焦点/决策过程/环境因素/培养团队成员的个人素质/激发团队创造力/管理机会和风险**Synergy(协同)-** a combined effect greater than the sum of their separate effects 1 + 1 + 1 = 10 (positive synergy)1 + 1 + 1 =  2 (negative synergy)**高绩效团队的特征**：分享共同目标感有效利用个人才能和专业知识拥有平衡和共享的角色保持解决问题的焦点接受意见和表达的差异鼓励冒险和创造力设定高个人绩效标准与团队确认**有利于高绩效项目团队发展的条件**：十个或更少的成员Voluntary团队,持续服务,Full-time分配给团队,合作信任的组织文化,成员仅向PM报告All relevant functional areas are represented on the team, 有compelling objective,Members are in speaking distance of each other.**如何在项目团队中管理不同类型的冲突**:Encourage Functional Conflict:Bring in people with different points of view.Ask the team to consider an unthinkable alternative.Manage Dysfunctional Conflict:Mediate, Arbitrate,Control the conflict.Accept & Eliminate the conflict.**Rejuvenating振兴 Project Team**: Informal Techniques:Institute new rituals./ Take an off-site break as a team from the project./ View an inspiration message or movie./ Have the project sponsor give a pep talk.Formal Techniques: Hold a team building session facilitated by an outsider to clarify ownership issues affecting performance. / Engage in an outside activity that provides an intense common experience to promote social development of the team **Feasibility Study**: 1) 明确易懂的definition of the scope of proposal 2) 现况Statement currently 3) Requirements Statement of the problem,声明问题项目实施后状况,约束:项目/组织/外部4) Approach 考虑选项/各种替代方案,建立购买/内部合同,解释首选项5) Evaluation所选方法的成本效益,include对其他潜在方法的估计High-level project schedule. 6) Review & decision.**ExternalStakeholder**:<不直接参与>监管部门特殊利益集团 - 整个社会政府机构和媒体机构个别公民 **DirectStakeholder**:<直接参与>Originator,OwnerSponsor,Functional managers,Contracts,Suppliers,Support companies, Users, Customers **Stakeholders Matter**:High power, interested people: 这些是你必须充分参与并尽最大努力满足的High power, less interested people: 做足够工作使他们满意，但不要太多以至于他们对你的信息感到厌倦Low power, interested people: 让这些人了解情况与他们交谈确保不会出现重大问题,这些人有助于项目细节Low power, less interested people: monitor,不要excessive**沟通项目成功因素**:What are the client's needs? 客户的需求是什么(high level, strategic)约束(内/外部)PM控制内外的因素(business case, why do)充足计划细节,Agreed 可交付成果,现实的时间表,准确成本估算,实现进度测量,积极主动的团队,控制范围,良好的风险管理,与客户达成一致的明确.Project scope:提供产品范围必须完成的工作(也称工作声明(SoW)或Project CharterProduct scope:The features and functions characterising a desired product, service or result. outcome of the project,<specific,tangible&measurable> scope statement的目的:明确定义最终用户的可交付成果,将项目的重点放在成功完成目标上,供项目业主和参与者用作规划工具和衡量项目成功 Project Scope – Checklist: 项目目标 :what, when, cost可交付成果 :progressive, Milestones: 通常与可交付成果一致;Technical requirements :产品性能限制, 限制和排除 :explicit out-of-scope items,客户的评论:agree on scope communication plan:…和Project status report,Deliverable issues,Changes in scope,Team status meetings,Gating decisions,Accepted request changes,Action items,Milestone reports+ 进行利益相关者分析以便确定他们的信息需求,所需信息来源,appropriate dissemination modes和谁有责任&时间安排Project(Team)Charter:<AKA:project scope>项目早期制作:团队的目的,工作方式以及预期结果.捕获并公布团队成员之间的协议,为了确保所有参与者都清楚他们前进的方向,并在时间变得艰难时给出指示,Outlines:Purpose,Objectives(critical success factors)Scope:MajorMilestones/deliverables /StatementOfWorkProvides基线和商定的参考点初步成本/进度/资源Includes假设约束要求.team与sponser合同,帮助scopeOf Teams’Effort. 3种基本软件开发:Traditional (Waterfall),Incremental(降低实施需求变更成本更好的客户参与和反馈提前交付可用的软件但流程可能不那么明显更多的开发和更少的文档和系统结构可能变得“混乱”因此需要定期重构)Integrative:configuring stand-alone multi-purpose applications, web services.Project:一系列finite dependent activit,其成功完成导致交付验证完成项目的预期业务价值.Program:相关项目的集合,可能需要按特定顺序完成,以使程序完成,程序可能有多个目标.Portfolio组合共享彼此共同链接的项目集合Project Management:Project management is the application of knowledge, skills, tools and techniques to project activities to meet the project requirements.PMLifeCycle: a sequence of processes including Scoping, Planning, Launching, Monitoring and controlling, Closing. 3W3H: What business situation is being addressed by this p; What does the business need to do; What will u do; How well did u do; How will u know u did it; How will u do it.Project Type: A:high business value, high complexity, B: high business value, high complexity , C: high business value, high complexity D: barely meets definition of a project 5 process group: scoping pg: includes all processes related to answering 2 qs: 1w2w, not include any process related to doing any project work. Planning: 2qs: 3w3h. Launching: include all processes related to recruiting and organizing the team and establishing the team operating rules; also includes all processes related to getting the p work started. Monitoring and controlling: 2h, includes all processes related to the ongoing work of the p. Closing: 1h. 10 knowledge areas: integration, Scope, Time, Cost, Quality, Human Resource, Communi, Risk, Procurement, Stakeholder **PESTLE(external):** Political, Economic, Sociological, Technological, Legal, Environment Principles of APM: 专注于客户价值迭代和增量交付实验和适应自组织连续的提高(rolling wave planning and scheduling project methodology. It uses iterations (“time boxes”) to develop a workable product that satisfies the customer and other key stakeholders.) APM Methodologies: 将项目视为非线性,复杂的自适应系统,其中变更是正常的,并且在关注于提供客户价值的同时,采用勉强足够的方法进行计划,流程和控制,重点是人和他们的互动.  产品目标是可以实现的，但它们是不可预测Processes aid consistency, they are not repeatable Small releases – helps manage complexity, provides early feedback. 1 to 3 monthsIterative and incremental development 计划要求设计代码和测试通过多次传递或迭代逐步发展iteration是固定长度的(usually 2 weeks), which maximises feedback. The fixed scope retains stability. Collocation – 这种安排有利于沟通和整合鼓励即兴会议和设计会议。Release plan / feature backlog 期望的功能在高级别定义并由客户确定优先级估计是在发布计划游戏（基于博弈论）中协同完成的开发人员提供工作量估算客户决定业务优先级Iteration plan/task backlog – 发布计划中的高级功能在迭代计划或任务积压中详细阐述并优先处理其实现任务,其余同上.Tracking 在迭代中跟踪功能和任务只有在100％完成时它们才算完整。没有部分完成的概念什么构成“完成”在项目开始之前达成一致。Self-organising teams – 团队成员通过积压完成任务自行组织，无需自上而下的管理控制.Simple, lean and adaptable 工作的所有方面包括流程都保持简单，精益（低浪费）并适应最大化客户价值和适应变化Agile Methodologies：Dynamic Systems Development Method (DSDM)Lean Development (LD)Adapted from manufacturing;改编自制造业;七项原则:消除浪费扩大学习尽可能晚地决定尽可能快地交付赋予团队权力建立诚信看到整体Feature-Driven Development (FDD)Extreme Programming (XP) Construction:项目开发完成, Transition:向公众发布的软件. Rational Unified Process (RUP)Adaptive Software Development (ASD): speculate, collaborate, and learn cycles Rapid Product Development (PRD) 跨学科研讨会和即兴会议整个工程团队了解所有功能简化流程提高质量控制系统的灵活性和无纸化审批系统强大的可重用软件代码库Agile PM in Action - Scrum Methodology holistic approach for use by a cross-functional team collaborating to develop a new product. It defines product features as deliverables and prioritizes them by their perceived highest value to the customer. Priorities are re-evaluated after each iteration (sprint) to produce fully functional features. Scrum’ 4 iterative phases: (1)analysis(2)design(3)build (4)test1sprint = 1 - 4 weeks outcomes(The way a thing turns out; a consequence.) outputs(The amount of something produced by a person, machine, or industry) documenting the scope -- the product backlog: control workflow & issues agile requirements using user stories: origin, (who, what, why ),(3C:Card, Conversation, Confirmation), generate acceptance criteria, big picture, (As..i want..so that) visual mapping tool to provide an overview of the total scope of the project: user story map, planning with story map. Scrum concept help move the process from one of the requirements delivery to one of requirement discovery. FALLACY - Requirements delivery process The customer knows what she/he wantsThe developers know how to build itNothing will change along the way REALITY - Requirements *discovery* processThe customer discovers what he/she really wants (not what he/she first thinks he/she wants)The developers discover how best to build it在APM中：项目范围包含在“产品Backlog”中敏捷产品待办事项是优先级功能列表，包含产品所需的所有功能的简短描述与许多传统托管项目不同，敏捷项目不会启动项目，需要花费大量时间来记录所有需求。 相反敏捷团队及其产品所有者通常首先写下他们可以想到包含在待办事项中的所有内容典型的ScrumBacklog 4 types items (1)Features. (2)Bugs(no diff btw new feature).(3)Technical work. ("Upgrade all developers' workstations to Windows 10.")(4)Knowledge acquisition (“Scrum backlog item about researching various JavaScript libraries and making a selection.”)Product Backlog控制工作流程产品所有者在sprint计划会议上显示优先级敏捷产品待办事项，并向团队描述最重要的项目,团队确定在即将到来的冲刺期间他们可以完成哪些项目,团队将项目从产品待办事项移动到sprint backlog。 通过这样做，他们将每个Scrum产品积压项目扩展为一个或多个sprint backlog任务，以便他们可以在sprint期间更有效地共享工作Conceptually, the team starts at the top of the prioritized Scrum backlog and draws a line after the lowest of the high-priority items they feel they can complete. In practice, it is not unusual to see a team select, for example, the top five items and then two items from lower on the list that are associated with the initial five. Product Backlog Issues: 长的“待办事项”清单 - 扁平结构。没有比WBS / PBS更好 - 专注于提供清单上的项目而不是提供价值。一个故事列表，与要尝试解决问题的用户的值无任何关联。按照您构建它们的顺序排列用户故事无助于向其他人解释系统的功能。您需要上下文才能真正讲述有关系统的故事。 但典型的产品积压没有上下文。典型的项目至少有几十个用户故事，通常超过一百个。 逐步完成每一个做出决定是单调乏味且耗时的。Agile Story: Shared understanding and alignment are the objectives of collaborative work故事的名称取决于它们应该如何使用专注于全局它们为管理系统需求提供了轻量级方法, his approach facilitates just-in-time requirements gathering, analysis and design by the following activities: -Slicing user stories down in release planning-Tasking user stories out in sprint planning-Specifying acceptance test criteria for user stories early in development. INVEST: Independent - The user story should be self-contained, in a way that there is no inherent dependency on another user story. Negotiable User stories, up until they are done, are part of an iteration (Sprint in Scrum), can always be changed and rewritten.Valuable A user story must deliver value to the end user. Estimable You must always be able to estimate the size of a user storySized appropriately User stories should not be so big as to become impossible to plan /task /prioritise with some certaintyTestable - The user story or its related description must provide the necessary information to make test development possible. User Story Map(USM): Activities = backbone, The essential activities required to deliver minimum viable product (MVP) Do not prioritise: Without any of these you do not have an MVP. Walking Skeleton:骨干下面的最高优先级任务,最小系统提供end to end functionalityReleases can be marked out in “swim lanes”Stories can be moved in or out of releases. Stories can have different heights within a release.Build all the major features a little at a time: Each release always adds value. Test by walk/talk through, left to right; Benefits of User Story Maps: big picture in your backlog, better tool for making decisions about grooming and prioritizing the backlog鼓励采用迭代开发方法，早期交付验证您的架构和解决方案传统项目计划的绝佳视觉替代讨论和管理范围的有用模型visual dimension to planning, & real options for your project /product Display as an info radiator : good for sprint or iteration planning, mark of progress. 减少问题的提示: 合适的利益相关者需要参与问题定义.利益相关者需要清楚地了解他们的运营/业务需求.利益相关者定义问题,而不是解决方案.解决方案和交付限制必须是真实的适用的和可协商的.发展战略（选定的生命周期模型）应满足业务和产品要求的不断变化的性质.逐步/不断发展对所需结果/技术解决方案需求的理解是常态.有效的项目管理不是一成不变的 ,需要遵守纪律和敏捷重点关注受项目影响的业务的整个变更范围, initial plan只适用于有限的时间,事情总是会发生变化.随着项目期间的变化必须收集信息做出决策采取措施并监控实施有效性.应在开发工作开始之前确定决策和产品开发的责任和权限;应在开展工作开始之前确定成功的衡量标准;应对所有关于复杂和高风险发展工作的技术和管理活动采用一致和连贯的方法应在整个开发活动中逐步寻求并提供质量证明。The Agile Project Plan:Exists at multiple levels:Product Vision Product Road Map Product Backlog.Iteration Backlog (also called sprint backlog)Daily task planning. Phases of the Agile Project Management Lifecycle –Initiation Phase:Visioning and development of the product roadmapPlanning = the evolution of the product over timeProduct backlog definition -- the broad scope of the projectThe initiation phase in an agile project also includes the following activities (many of which are also completed during initiation in a traditionally managed project)Setting up the environmentDocumenting the architectureRelease planningTeam coding standardsDefinition of “done”Agile initiation may also include development of the business case & feasibility study. Product Release: Consists of one or more iterations Iterations = PMBoK Sub-PhasesBegins with Release Planning One or two day eventInvolves whole team, including customer Output = Release Plan = high level STRATEGIC planGoals, assumptions, and decisions to guide the team so that it delivers value to the customerEnds with Release RetrospectiveInputs to release planning Prioritised and estimated product backlog Backlog = *PMBoK* User RequirementsTeam’s velocity Velocity = rate at which a team completes work (user stories) and turns them into running, tested and documented features Product vision & road map.Phases of an Agile Project – Agile Iteration: Iteration = one timebox of work; Timebox has a fixed start & end date. Iterations are usually between 1 & 6 weeks long Managed by the team: Consists of daily tasks for individual team membersBegins with a planning meeting with customer. Each agile iteration begins with Iteration planning:Output = detailed task list = tactical guide. Team manages work within an iterationIteration plan updated to reflect reality Daily Work: Lowest level of the “agile fractal” Interim Phase – Releases agile project ALWAYS delivers a working (set of) feature(s).Within each release, there are a series of “iterations".Final Phase -- The Project Retrospective (= PMBoK Closing process) The final phase in an agile project is the project retrospective, which equals the project ‘post-mortem’ in a traditional project. 项目回顾涉及整个项目管理团队和关键利益相关者包括客户回顾的目的是反思整个项目以改善下一个项目的管理流程Scheduling: 用于确定整个项目持续时间以及计划何时发生活动和事件的过程这包括确定活动及其逻辑依赖关系并估算活动持续时间同时考虑到资源的需求和可用性Schedule Development: 确定项目活动的计划开始和结束日期如有变更和频繁修改修订提高了准确性解释了变化Iteration Review Collaborative decision making about the product Walkthrough of the completed work as well as uncompleted work, review iteration metrics Iteration Retrospective: Decisions flow into next iterationWhat when well What needs improvement Updated priorities for backlog. Product Owner: manage vision, the ROI, releaseScrum Master: manage the processTeam: manage the development iteration“ready”Feature(s) to be developed in sprint iteration need to be:•Immediately actionable by the team•Product backlog is designed to be a negotiation between the product owner and the team – so talk it through before planning the sprint, meets the [INVEST](http://agileforall.com/wp-content/uploads/2009/10/Story-Splitting-Cheat-Sheet.pdf). DoDone: No non Done story in iteration meetingDone is about quality not approval from external partiesDevelopment ‘done-ness’: Well-written code, Documentation completeAcceptance criteria ‘done-ness’: User can request a password reminder When to use Epic not user story? 进行长期规划;作为业务案例或项目启动的一部分，在初始估算期间不需要完美非常精确的估算。 相反通过高级产品积压提供的高级评估就足够了大型用户故事 - 史诗 - 描述了大量的功能;和在您准备开发它们之前 -记住just-in-time decomposition是可行的方法How to break down epics into stories?分裂故事通常将高价值部分与低价值部分分开，使团队有时间专注于特征的有价值部分。 这有助于通过开发最小的端到端解决方案然后填写其余解决方案来提供价值。 经常拆分故事称为分解。Flowchart for Splitting Epics•Prepare the input story•Apply the splitting pattern •Evaluate the split. 1.工作流程步骤首先构建一个简单的端到端案例然后添加中间步骤和特殊情况。2.业务规则变化作为用户，我可以搜索具有灵活日期的航班。作为“x和y之间的n天”3.重大努力故事有几个部分，但大多数努力都是第一部分。例如，按信用卡类型拆分故事：大部分工作都是创建第一个故事4.简单/复杂捕获最简单的版本以及一些验收标准。然后在他们自己的故事中添加变化和复杂性。例如，作为用户，我可以搜索两个目的地之间的航班。5.数据的变化首先构建最简单的。例如，作为内容管理员，我可以创建新闻报道。6.数据输入方法复杂性通常在UI中，而不是故事中。例如，作为用户，我可以搜索两个目的地之间的航班。7.推迟表现从最简单的开始，提供价值。让它工作，快速。作为用户，我可以搜索两个目的地之间的航班。8.运营故事通常以“管理”一词开头。例如作为用户，我可以管理我的帐户。9.突破“尖峰”当执行情况知之甚少时，需要时间限制才能解决问题. 太多的故事导致Bloated backlogsExtra work (possibly mis-work) on storiesTeam taking its eyes off business valueLoss of focus on the user To develop quality "ready" stories in addition to the usual product owner you should aim to include a tester, a member of the core product discovery team and a user experience designer in your story-writing workshops. Story mapping: helps the decomposition process while keeping the focus of the conversation on the people who will use the product and what makes those people successful. **User stories** are simple, and written from the perspective of the end user. **User scenarios** are richer descriptions of the user story. They take into consideration the motivation of the user and the environment within which the user story lives. **Minimum Viable Product (MVP/MVS)**A great way to remember what the MVP should be is M U R F SSpecifically Marketable Useful Releasable Feature Setthe smallest product release that successfully achieves its desired outcomes; the smallest solution release that successfully achieves its desired outcomes **Estimation supports and enables good decision-making** **During initiation of the project -** 它用于确定项目应采取多长时间以及可能的成本，用于确定项目是否值得做。 此信息还可用于帮助组织确定现金流量需求。**Project underway -**制定分阶段预算并确定项目基线所需的时间和资源估计有助于项目经理安排项目工作，并为下一次发布和迭代（冲刺）选择合适的范围估算过程促进团队成员之间的讨论和协作，从而促进团队的支持和承诺，建立信任并增加个人团队成员对责任的接受程度。**Barry Boehm的'不确定性锥':**最小化不确定性：'行走骨架'估计反馈的频率增加近期不远的未来估计.项目开始 - 至少是已知的，但要求精确度为12个月的项目估计可以在3到48个月之间！**Relative units of measure** Story points: unit of measure used to express the overall size of a user story, feature or other piece of work.The value of a story point is related to how hard it is (risk, complexity, and definition of done) and how much of it there is (effort). **It is NOT related to the amount of time or the number of people.** Raw value is unimportant – what matters are the relative values!Fibonacci sequence: Relative units of measure are unit-less but numerically- meaningful. Humans intuitively understand relative sizes of things. *Story points are additive, time is not.* A story point is an **amalgamation** of theamount of **effort** involved in developing the storythe **complexity** of the story and its developmentthe **risk** involved the **quality** required (the definition of "done")重点关注估计大小，而不是持续时间 - 我们通过查看每次迭代完成的数量，从经验上得出持续时间,将估算值放在可以加在一起的单位中 - me-based estimates are not additive**理想的时间**：理想的时间是在剥离所有外围活动时执行某事所需的时间。理想日期的估算忽略了诸如打电话处理电子邮件…并假设个人仅处理该任务而不是处理多个任务. 估算理想天数时，您需要假设：正在估计的故事是你唯一可以处理的东西，你需要的东西将随时可用; 不会有任何中断合作*Ideal time* is not additive – it is still a ***relative unit*** of measure. Approach to estimate: Expert opinion: used more frequently with traditional rather than APM can be individual or group relies on "gut feel" based on (extensive) experience; Analogy: estimator compares the story to an assortment of other stories which have already been estimated; Disaggregation: by splitting the feature/p into smaller features and estimating each need to make sure u don't miss any tasks; Planning poker: combines above, enjoyable, produces quick and reliable estimates. The goal of estimation is not to derive an infallible estimate but to achieve a valid estimate cheaply. The goal is not absolute precision but reasonableness. estimate the size of the task from which we derive the duration and it is the duration that we use to determine the schedule.



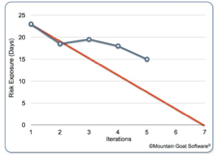
Velocity = Story points per iteration: 速度的概念基于这样的假设：如果一个团队在最后一次迭代中完成了10个故事点，那么他们将再次完成10个这个和随后的迭代。速度是团队进度的衡量标准，通过对迭代过程中完成的故事点总数进行求和来计算。要确定项目的总大小估计值，请将每个故事的故事点估计值相加。使用团队的速度，我们可以估计所需的迭代次数。持续时间是通过将所需的迭代次数映射到日历上来计算的。估计大小但是导出持续时间。使用相对估计和速度来推导持续时间意味着计划错误是自我纠正的。Approaches to calculating velocity: Use historical values, Run an iteration,Make a forecast, 因为不准确所以：best to express velocity as a range. 使用历史值估算速度使用此方法有两个主要问题。首先，如果您没有历史数据，则无法使用该方法; 第二，什么时候发生了重大变化？ 此更改包括与之相关的更改技术。 域。 球队。 产品拥有者。工具。 工作环境。 人们估计当同一团队转向同一产品的新版本时，这种方法最好。 由于存在不确定性，您可能需要提供更大的范围来反映这种不确定性。 使用历史值计算速度是一个简单的计算。例如：在上一个版本中，团队完成了150个故事点，它由10次迭代组成。 因此，速度= 15点，（即150/10 = 15）通过运行迭代来估算速度预测速度的理想方法是运行一次（或三次）迭代。这应该始终是默认方法。暂缓给出一次迭代的估计并测量该迭代的速度，然后乘以0.60和1.6计算该一个数据点的范围。最好在给出速度估计之前运行三次或更多次迭代，因为这为计算范围提供了额外的选项。简单方法：例1：想象一下你已经完成了3次迭代，速度分别为12,15和16.因此范围是12到16。示例2：计算您运行的迭代的平均速度，在这种情况下，它是14.3。将其向上舍入到15.（永远向下舍入！）对于每个完成的迭代，在不确定锥上向右移动一步，最多4步（产品设计规范）。要计算范围，请将平均值乘以表示步长的y轴上的数字。三次迭代，平均速度为20.对于3次迭代，范围为85％至115％。通过预测来估算速度如果没有历史数据，则使用此方法，并且运行一些迭代来观察速度是不可行的。 例如，项目将在12个月内启动，或者在合同签署之前不会启动。 在这些情况下的任何估计都反映出相当大将用户故事扩展为组成任务，如计划迭代时，计算出适合迭代的内容，然后计算速度估算每人每天的可用时间。确定每次迭代的总小时数。选择一些（任意和随机）故事并扩展到组成任务以填充迭代。 将速度转换为范围。请记住 - 可用时间不等于每天工作时数 选择适当的迭代长度：迭代通常在两到四周之间。偶尔它们可能会更长或更短1. Length of the release being worked on 2. The amount of uncertainty 3. The ease of getting feedback 4.  How long priorities can remain unchanged(在绝对最小值下，它是一次半迭代) 5.  Willingness to go without outside feedback 6.  The overhead of iterating 7.  How soon a feeling of urgency is established(To overcome this you can use a macro-cycle: 6 x 2 + 1 Six 2-week iterations followed by a 1-week iteration) 为什么计划失败: Much of the planning is done by activity rather than by features这意味着当活动迟到时，由于活动不是独立的，因此延迟传递。要求团队成员执行多任务（处理多个项目）会进一步降低生产力。此外，最重要和最优先的功能并不总是首先开发，这意味着客户必须等待更长时间才能获得价值。Planning the release通过提供工作软件来衡量进展，即团队正在取得进展的具体证据。该计划是使用优先级要求或特征开发的，即优先级产品积压。调度项目是在高度抽象的用户故事中完成的。不要忘记在计划中包括培训等活动，并确保选择反映环境的方法发布计划是一个高级计划，涵盖多次迭代，3到12次（甚至更多次）迭代。究竟有多少将取决于每次迭代的时间长度以及整个项目的运行时间。每个版本涵盖许多个月，通常在3到6个月之间故事并分解Timing:Release planning happens after initial approval of the project and then again at the start of every release cycleWho is involved:The Product owner, all delivery teams, the system architect, and any other experts, including subject matter experts.Preparations:Epics on the backlog are inspected by the participants in the release planning meeting. When necessary new stories are written and epics decomposed. Stories to be included in the release are estimated and the delivery team familiarizes with themselves with the stories.What: The highest priority stories are then moved to the best iteration within the release that will allow the release to meet its goal. Approaches: There are two principal approaches to developing a release plan.The first is to start with an end date and see how much can be completed within that time frame.The second is to take a set of user stories and see how long it will take to develop them. Which approach is better at any time will depend on the project context and the constraints under which it is operating. Scrum迭代是Sprint迭代（或Sprint）在整个项目中具有一致的持续时间。它们是一个“时间盒”在此期间创建完整（或“完成”）可用且可能可释放的产品增量,下一次迭代在前一次迭代结束后立即开始。迭代VS.发布计划发布计划从一开始就对产品进行了几个月的展望.迭代计划仅在迭代期间向前看。在迭代计划期间，用户故事被分解为任务，估计是以小时为单位而不是故事点。迭代计划有助于提高理解并引导有关产品和软件设计的讨论敏捷迭代计划的目标是什么？在规划迭代时，团队必须始终拥有“整体”的视图，以便各个团队成员始终了解他们的工作在实现全局目标中所扮演的角色。牢记全局，有助于团队实现每次迭代的商定目标迭代计划的一个重要目标是确保团队成员只能加载适量的工作，而不是太多，而不是让他们感到无聊目的是创造最佳的交付故事流这将需要发现和管理依赖关系和风险迭代计划还用于确认现有的估计和优先级,以及团队承诺交付 - 不仅是一次而且是持续的迭代计划时间：迭代计划在每次迭代开始时，在“迭代计划会议”期间进行。涉及的人员：所有交付团队，产品所有者，系统架构师以及任何其他专家，包括主题专家。准备工作：在规划会议之前，需要有足够的详细信息，使交付团队能够将故事分解为任务并对其进行估算。内容：在迭代计划期间，创建迭代计划本身。它包含详细的故事，分为任务，对这些任务的估计，团队成员的承诺，并记录所有依赖关系。有形：计划会议的结果是有形的;电子表格或一组卡片，提供有关哪些任务与哪些故事相关的详细信息。Velocity-Driven is based on previous velocity. Steps 1 & 2 - Adjust priorities and determine the target velocity: can be carried out in any order*1. Adjust* 优先级这是通过协作完成的，并且基于对早期迭代的学习。 它允许出现好的新想法。 优先级由组织价值（通常是财务），成本，重要性，风险等驱动。*2. Determine target velocity* 默认位置与上一次迭代相同。 另一方面，目标速度可以是最后3次迭代的移动平均值。 哪个更合适将取决于团队和他们在每次迭代之间经历的速度变化。5次迭代的速度12,12,14,14,10 ,? Sprint 4的移动平均线= 13，Sprint 5 = 14，Sprint 6 = 13 *Step 3 - Identify iteration goal* 简要描述团队将实现此迭代的内容。 统一声明，由团队的每个成员同意，并不过于具体*Step 4 - Select User Stories*产品所有者和团队一起工作，选择有助于团队实现迭代目标的故事。 故事选择基于分配给每个故事的优先级*Step 5 - Split user stories into tasks*在将故事分成任务时，重要的是只包括为此迭代增加价值的工作。 任务必须是特定的，并且必须包括单元测试。 会议（参与和准备）的时间也必须允许，并允许修复错误。 确保所有依赖关系都得到考虑也很重要。 当依赖关系不允许以其自然顺序进行开发时，这可能很困难*Step 6 - Estimate tasks*任务估计可以在所有任务被识别之后完成，也可以在识别每个任务的同时进行。The right size task is something that is able to be completed in a single day. Estimation is collaborative activity as it helps to identify misunderstandings and so leads to greater accuracy of estimation. It is OK to have some design discussion during estimation, but this is usually only about how something will be implemented or UI design. Guesses are all that is needed at this point. Commitment-driven iteration planningCommitment-Driven is based on adding stories. *Steps 1 & 2 - Adjust priorities & Identify iteration goal* As for velocity-driven planning. *Steps 2, 3, 4 & 5 - Select a story, Expand the story into tasks and estimate the tasks* As for velocity-driven planning, except these steps are done iteratively, story-by-story.*Step 6 - Seek Team Commitment* At this point team commitment to the individual story is sought. The team is asked, “Can you commit to delivering the features we’ve discussed?” 此方法的显着区别在于commit to deliver new functionality not a set of tasks。这种对功能交付的承诺包括团队承诺提供迭代期间发现的任何新任务。这可能会有问题，因为可能无法完成迭代中的所有新任务。 如果是这种情况，则与产品所有者讨论该情况。团队和产品所有者协作确定如何满足迭代目标。 这可能涉及减少要传递的功能或通过完整地删除故事。迭代地执行步骤2,3,4,5和6，直到迭代“满”。维护除了开发工作，团队可能还需要支持现有系统。这可能是团队目前正在开发的软件的先前版本，也可能完全不相关。在承诺开发一组用户故事时，记住维护和支持工作量非常重要。维护工作环绕支持和修复是非常不可预测的。Value of Commitment-Driven Planning：顾名思义，基于速度的计划基于团队的过去速度。速度是粗粒度估计的度量，可用于估计总体工作量。速度对于估计短期工作是无效的，因为在很多次迭代中很难“平均”速度的可变性。故事点和小时之间只有很弱的关系。并非所有的故事都是平等的！ - 隐藏的任务和复杂性 - 与业务利益相关者和用户/客户一起评估Iteration Review Meeting： Iteration review meetings are held at the end of each iterationIteration Retrospectives: Iteration retrospectives usually the last thing done in an iteration. May immediately follow on from the iteration review meeting. **Evaluate after release.** Learn to use metrics to learn if and how people use your product. Use face-to-face conversation to learn why they do or don’t use it. If you predicted people would use your product; or that the company would benefit from it don’t just assume that is what has happened.Use metrics and conversations to really learn if your target outcomes were met. **What is project governance?**Governance is the management framework within which project decisions are made. It provides a bridge between management and IT.**Why do we need it?**Someone has to make project decisions within the context of the business operationCommunications work better when the people sending the messages have recognised authority **Project governance seeks to answer the following two questions:**Are we getting **value for money**? It is important to measure the **effectiveness of the money spent**. Use **fact-based measurement** based on outstanding scope, work completed, total expenditure and trendsDo the proposed solutions meet our full expectations? How **complete is the solution**? Does it address the full range of corporate policies, including security, architecture, quality, risk etc. **质量治理导致**:减少“惊喜”增加信任和信心，与战略一致的执行,质量管理使IT不再陷入自身问题，因此能够更好地响应业务。**Core Governance Principles:** 项目成功的单点责任（有权威的人，可称为高级负责人）服务交付所有权决定项目所有权（因为项目的主要原因是提供服务结果）独立的利益相关者管理和项目决策（使决策团队规模小，重点突出）单独的项目治理和组织治理（因为项目是关于变化，而不是照常营业）**The Three Pillars of Governance Structure** : Determines how the decision-making is organised (e.g. decisions about investment, business change, timing etc.)**People** : Roles, skills, authorities, recognition, influence, commitment**Information** : Lines of reporting, accountability, communication**关键治理角色**:建立项目治理的基础（角色责任，政策，标准，管理/报告流程）评估项目提案通过资源配置和利用业务支持来启用项目从项目中定义所需的业务成果，收益和价值控制范围，应急资金，整体项目价值监控进度，承诺和结果衡量产出，成果，效益和价值引导项目，消除障碍，管理关键成功因素，弥补不足发展组织的项目交付能力**ITIL I**nformation **T**echnology **I**nfrastructure **L**ibrary (2011) – supports IT Service Management and underpins ISO/IEC 20000 – The International Service Management Standard.**ITIL** is used to help improve the **quality of services** delivered by providing a standard and repeatable set of functions, processes and procedures for service management.**PMBoK P**roject **M**anagement **B**ody **o**f **K**nowledge (2013) – Developed from work done by the Project Management Institute. **PMBoK** is used to help improve **project management** of projects.  It includes a separate extension focussing on Software.**COBIT C**ontrol **OB**jectives for **I**nformation and Related **T**echnologies (2012) - “aims to research, develop, publish and promote an authoritative, up-to-date international set of generally accepted ***information technology control objectives for day-to-day use by business managers***, IT professionals and assurance professionals”.  **COBIT** is a **governance** methodology - helps organisations govern their projects, do self-assessment, and manage culture and “best practice” behaviour.**PRINCE2 PR**ojects **IN** a **C**ontrolled **E**nvironment (2009) – Is a ***project management methodology***, developed by the UK Government.**PRINCE2** is a variant **project management** methodology - helps improve project management of projects. **质量管理的假设**客户满意度是项目成功的关键因素。 客户满意度可以描述为符合要求和适用性。最好是计划质量并防止发生缺陷和错误，而不是在检查过程中发现错误。Deming和Shewhart定义的计划 - 执行 - 检查 - 行动是质量改进的坚实基础，但在质量流程中没有明确定义大部分质量投资来自组织。质量流程和程序 - 认证 - 对专有方法的投资（TQM或六西格玛） - 质量审核 - 是组织的责任。 项目有责任遵循这些流程。我们管理质量的方式不同**Pro-active Approaches:** 规划流程和产品说明标准和模板流程和产品指标通讯报告**Re-active Approaches**测试 - 只是管理质量的一种方式评论，检查和演练缺陷和问题跟踪与软件 **质量因素的比较质量标准存在风险的指标:** 领导指标(LEAD INDICATORS)没有实施计划或计划没有独立审查缺乏流程（甚至可以识别非正式流程）没有编码标准与客户和最终用户的不经常联系团队成员之间没有问责制或无法表达他们的贡献无法证明进展意外风险正在实现团队成员只能独立工作，没有或很少有同行评审很多技术“解决方法”参与项目角色之间的关键依赖关系不足专业知识不足或所有必要的人都没有提供意见LAG指标系统不稳定（小变化具有广泛影响）无法证明进展用户只能发现缺陷缺陷需要很长时间才能纠正. Quality is a **whole-team responsibility**The **concept of “done”** is fundamental to quality development **Testing is integral to the process** rather than something that is left until later Testing is automated, but this is not the only form of testing Continuous integration **Relationship between “done” and “conditions of satisfaction”**Definition of “done” (DoD) is a special set of conditions which is applied to every user story before any story is considered complete“Conditions of Satisfaction” (COS) are specific to an individual user story**在迭代中自动化:**快速提供价值依赖于自动化测试提供对产品状态和过程的深入了解尽早自动化测试 - 始终在编写代码的同一迭代中改造自动化测试很困难,尽早添加意味着测试设计可能会影响产品的设计. **PMBOK Quality Management:** Plan for Quality, Perform Quality Assurance, Perform Quality Control. **Risk**: Uncertain or chance events that planning can not overcome or control.The combination of the probability of an event and its consequence. NOTE: The term "risk" is generally used only when there is at least the possibility of negative consequences. risk arises from the possibility of deviation from the expected outcome or event.**According to PMBOK:**An uncertain event or condition that, if it occurs, has a positive or negative effect on a project’s objectives**According to AS/NZS 4360:2004 Risk Management:**Risk is the chance of something happening that will have an impact on objectives (Risk may have a positive or negative impact)**According to PRINCE2:**A risk is an uncertain event or set of events that, should it occur, will have an effect on the achievement of objectives**.** Uncertainty – Likelihood, Impacts/Consequences, TriggersImpact - Negative and positive (risks and opportunities), Immediate, Delayed, Ongoing



a) risk avoidance; b) reduction of likelihood; c) reduction of consequences; d) risk transference; **Benefits of Agile when managing risk**:Risk is owned by the teamAgile approaches encourage proactive risk management Identified and reviewed in all planning meetings: release, iteration and daily stand-upTesting is an integral part of each iterationCan consider agile methods as “risk-driven”Pull user stories with risks forward in the backlogIncreased engagementDone by the whole team not just the PMRevisited frequently – with each iterationRather than only at the start of a project when we know least, and only reviewed occasionallyIntegrated into lifecycleHigh visibility Stakeholder engagement because risk management is a team activity **Create risk burndown chart** Plot the sum of the risk exposure values from the census**:** Only sum the **top ten risks**, even if more have been identified**.**Top ten will change over the course of the project. 与常规燃烧图表一样，项目过程中的风险应该会线性下降(red line)



如果风险没有在适当的费率预算下降，那么在下一个sprint中的某个时间可以直接用于风险缓解在迭代过程中风险不会迅速降低燃尽图表示迭代中的风险状态。从项目管理的角度来看，这是如何管理和控制风险的极好指标。



**Project Scope – establishing priorities:Constrain**: a parameter is a fixed constraint that must be satisfied.**Enhance**: a  parameter that would be preferentially optimised ahead of others if there is opportunity.**Accept:** a parameter for which failure to satisfy is acceptable in a tradeoff situation. *As a [Who] I want [What] because [Why]. ===> user story == requirements <Less details, no how; no why == no value> If a project team member tells you it will take 100 hours of effort to complete an activity, and she has two people who are available 30 hours a week, how many days’ duration will it take?100 hours/(2\*30) = 1.67 weeks or 8.35 days.* **Converting Effort to Duration:**：示例如果项目团队成员告诉您完成一项活动需要100小时的努力，并且她有两个人每周工作30小时，那么需要多长时间？请记住，努力不等于持续时间。如果工作日为8小时，则生产率不可能超过8小时。当计算持续时间时，始终考虑非生产时间。这将根据角色而有所不同;项目经理将比在100％的时间从事该项目的程序员具有更大的“非生产性”时间。100小时/ 2 =每人50小时工作50/30 = 1.67周或8.35天PLUS 25％非生产时间= 2天每个人的工作时间大于2周 ……………………………………………………………………………BAU no specified time-frame, life-cycle; it’s about daily operation. Project has goal, solution, values, life-cycle, it’s about change, an exception, a unique endeavor. ////PMC: from beginning to the end of software development. SLC: the use length depend on requirement & demands. /////Project management Body of knowledge. Improve project management and focus on software by initiating, planning, excuting, monitoring and controlling, and closing.