SWEN90016

软件流程 & 项目管理

风险管理

2021 – 第二学期
教程3

今天的目标

理解 风险管理

虚拟现实模拟器

骑行墨尔本-> 悉尼

正式的风险活动流程

Risk Management Planning

(1 Decide how)

(2 Find them)

Risk Identification

Qualitative Risk Analysis

3-a：评估可能性，影响 & 优先事项

Quantitative Risk Analysis

3-b：文件

Risk Response Planning

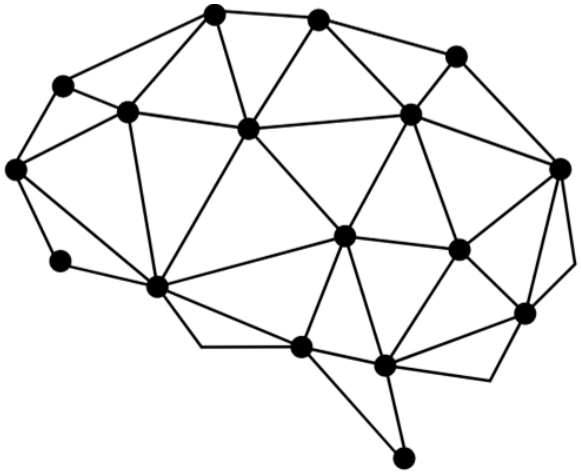
4. 决定策略

Risk Monitoring & Control

5. 行动 & 措施

分析

评估概率、影响和优先级



筛选项目中的所有风险

回顾和辩论它们的重要性

什么是 前三/四风险 被控制?

表格中的文档。

风险登记册： 触发和后果

Risk No	Risk description	Trigger event	Risk Owner	Consequence	Probability	Mitigation strategy
1	SMEs unavailable. SMEs are required to perform other duties while working on the project	Each team member has a number of hours assigned to the project each week	Ping Lu	Lack of team involvement will have an adverse affect on schedule	High (.9)	Immediate resolution: Hire temporary personnel for low skilled labour jobs while SME works on the project Monitor the mitigation strategy
2	Scope of the project is changing – scope management plan is too lenient	Middle management requiring changes to system after scope defined	Nick Lees	Will have an adverse affect on the scope of the project causing cost and time delays	High (.9)	Immediate resolution: Reevaluate the scope management plan and set guidelines in place Monitor the mitigation strategy

风险登记册： 目标、所有者、基准

Strategic Risk Register – May 2006

Ref No.	Corporate Objective	Ref. No.	Risk Description	Risk Owner	Mitigation Control	Priority	Sources of Assurance
C2	To target resources & initiatives to overcome poverty and disadvantage	R1	Failure to achieve equality targets & improve community cohesion.	Corporate Equalities Group Environmental Services Director	1. Regular monitoring of Corporate Equalities Plan 2. Level 2 fully embedded by December 2006	M	Internal & external audit review. Consultation with minority groups.
		R2	Failure to deliver improvements in the benefits service.	CMT EMT OSCs Cabinet	1. Regular monitoring by TEN system 2. Quarterly reports to OSCs & Cabinet	H	Monitoring by DWP & BFI. Internal & external audit.
		R3	Costs of new concessionary fares scheme exceeding budget.	Assistant Director-Community Finance	1. Monitoring of costs, as part of integrated performance management report. 2. Quarterly reports to OSCs & Cabinet.	M	Cabinet & OSC monitoring. Monitoring with other Warwickshire Districts.
		R4	Failure to deliver major improvements in Camp Hill – reputation risk; loss of housing.	Cabinet Chief Executive	1. Monitoring by Project Board 2. External project management.	H	Pride in Camp Hill monitoring. Liaison with AWM & GOWM.
C3	To encourage the provision of new & improved housing to meet the needs of residents	R5	Failure to deliver continued improvements in Housing Services	Corporate Services Director Assistant Director-Housing	1. Monitoring of Improvement Plan.	M	GOWM monitoring. Housing inspectorate.
		R6	Failure to achieve the 'Decent Homes' standard for private sector housing.	Corporate Services Director Housing Portfolioholder	1. Stock Condition Survey.	M	Internal & external audit review. Performance indicators.
C6	To work in partnership to reduce	R7	Failure to deliver continued	Chief Executive Assistant Director	1. Monitoring by Safer Communities Group	M	Annual external audit. Safer Communities

Information Technology

风险登记册： 概率与时间

Risk	Probability of Risk	Size of Loss (Days)	Risk Exposure (Days)
Backup and restore may require the inclusion of additional third-party products.	20%	15	3
The lack of scientifically relevant sample data impacts Partner A's ability to validate the product.	35%	20	7
There won't be time for Partner A to provide feedback on the format of Analysis reports, which means they could find the reports unacceptable during validation.	10%	5	0.5
Partner A employees are not available to validate the new features until too late in the process, limiting our ability to make additional releases that address any issues they might uncover.	20%	5	1
There won't be time in the QA process to validate, equally, on all browsers on all operating systems.	40%	5	2
Partner A may require more end-user documentation than has been provided.	25%	20	5
参考：https://www.mountaingoatsoftware.com/blog/managingrisk-on-agile-projects-with-the-risk-burndown-chart		Exposure:	18.5

项目风险

了解您的项目 *风险*

- 如果这个项目失败了，你认为是什么原因?

- 您打算使用哪些危害最小化策略?

风险

新硬件的意外行为

比较 C++ 中图形库的可用性 / Java 算法复杂度

分析

计算： 可能性 影响 暴露

风险	可能性 风险	损失大小（天）	风险暴露 （天）
风险 1			
风险 2丶			
风险3			

风险可能性= 之间的度量0和1包括的

风险影响 =有限 1-5级规模，例如：

(1) 无；(2) 最小的；(3) 适中；(4) 严重的；(5) 灾难性影响；货币成本还是时间成本?

风险暴露 =概率×影响

计算：概率影响暴露

风险	可能性 风险	损失大小（天） 总共 30 天 对于 6 周的项目	风险暴露 （天）
风险 1 意外 新人的行为 硬件	10%	5天 **中等 - 3**	0.5 天
风险2 算法的 复杂	5%	15天 **严重 - 4**	0.75 天
风险3 图形化 C++ 中的库 / 爪哇	25%	2天 **最小 - 2**	0.5 天

游戏 – 4Cs – 风险应对

费用

结果

语境

选择

响应、监控和控制

添加应对威胁和机遇的响应策略

THREAT RESPONSE	GENERIC STRATEGY	OPPORTUNITY RESPONSE
Avoid	Eliminate uncertainty	**Exploit**
Transfer	Allocate ownership	**Share**
缓解	Modify exposure	**Enhance**
Accept	Include in baseline	**Ignore**

监控进程

审计
审查
状态会议

https://2020projectmanagement.com/news-and-events/risk-and-opportunity-management--a-3-dimensional-approach

Sprint Review 风险评估

What
Where
Who
When
Why

- 构建具有最少功能的小块工作软件
- 向利益相关者展示产品块 **早期的**
- 失败 **快速地** 并尽可能便宜，并获得及时的反馈
- 捕捉 ***风险项目*** 在产品待办列表中
- 产品负责人设定优先级 ***风险项目***

正式 vs 敏捷

之间的特征的主要区别是什么
形式增量 和 敏捷迭代 SDLC?

正式的

显式架构
明确的用户体验设计
（最终用户考虑）显式配置

敏捷

生产力提高
响应反馈
（客户满意度）
工作软件

怎么会有这些特点 影响风险 管理?

未雨绸缪

及时计划

风险-不好的例子

实际差的例子：（全部取自 2015 年 12 月 Google 的第 1 页）

“范围不明确“。

“项目可能会延迟”。

“项目估算非常乐观”。“数据质量差

”。

风险 - 更好的例子

存在这样的风险

“不得颁发出口许可证。” “地面条件可能不适合……”

“关键（特定）系统接口可能不兼容。” “可能没有所需设备的物理空间。” “所需图像质量的数据速率可能会超出容量。” “监管机构可能会提出与……有关的新要求”

“（要求）完全空间覆盖在物理上是不可能的”

https://www.pmis-consulting.com/example-project-risks-good-and-bad-practice/

谢谢你！

那很有意思！

IBM (2008)：40% 的 IT 项目满足进度、预算和质量目标

http://www-935.ibm.com/services/us/gbs/bus/pdf/gbe03100-usen-03-making-change-work.pdf

毕马威 (2013)：组织三分之一的 IT 支出可实现预期结果

https://www.kpmg.com/NZ/en/IssuesAndInsights/ArticlesPublications/Documents/KPMG-Project-Management-Survey-2013.pdf

XDNET (2009)：估计失败的 IT 项目在全球范围内的成本高达 6 万亿美元

http://www.zdnet.com/blog/projectfailures/

全球故障成本 6-2 万亿/7627