



# Element U3.E5: Risk Management

## Risk Management Strategy



# Agenda

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U4.E5

Risk Management

GW

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**ECQA Certified Training Material**  
**Version: 2016**  
**Authors: MODI-FY Projectteam**

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**U3.E5 page 2**

# Agenda

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|-------|-------------------------------|----|
| U4.E5 | Risk Management               | GW |
| 1     | Learning Outcomes             | GW |
| 2     | Definition Risk management    | GW |
| 3     | Risk identification           | GW |
| 4     | Risk assessment / -evaluation | GW |
| 5     | Risk surveillance             | GW |
| 6     | Organisational pre-condition  | GW |
| 7     | Group work "Apply FMEA"       | GW |

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# MODI-FY Learning Outcomes



| Competence                            | Level | Learning Outcomes                                  |  |   |
|---------------------------------------|-------|--|--|---|
|                                       |       | Knowledge  | Skills/ Application  | Approach  |
| developing a risk management strategy | 5     | describe risk management                           | select appropriate risk management strategy                                      | feel confident in developing a risk management plan |
|                                       |       | name and describe risk management strategies       | apply risk management tools  | appreciate the value of risk management plan        |
|                                       |       | name and describe benefits of risk management      | apply appropriate analysis and recording tools to prepare a risk management plan |   |
|                                       |       | name and describe risk management tools            |  |   |
|                                       |       | describe the development of a risk management plan |  |   |

# MODI-FY Learning Outcomes



| Competence                             | Level | Learning Outcomes   |   |  |
|--|-------|---|---|--|
|  |       | Knowledge   | Skills/ Application   | Approach   |
| implementing risk management strategy  |       | name and describe risk management implementation strategies                   | developing an appropriate risk management implementing process                      | Accept responsibility for implementing and living a risk management plan |
|  |       | name and describe risk management implementation tools                        | apply appropriate implementation tools  |  |
|  |       |   |   |  |
| communicating risk management strategy |       | describe dissemination and communication of risk management strategy and plan | develop appropriate risk management dissemination and communication plan            | Feel proud to communicate risk management plan                           |
|  |       | name and describe dissemination and communication means and tools             | develop appropriate risk management dissemination and communication measures (KPIs) | Feel responsible for success of risk management                          |
|  |       | name and describe success measuring tools                                     |   |  |



## Risk management (ISO 31000: 2009):

- “is a management function, which revolves around identifying, analysing and assessing the risks of an organisation. For this purpose, it will set high-level objectives, strategies and policies for an organisation’s risk management.” (<https://de.wikipedia.org/wiki/Risikomanagement> )
- This includes
  - setting/determining criteria by which risks are assessed and evaluated,
  - risk determination methods,
  - responsibilities for decisions featuring risk management/handling,
  - providing resources for risk prevention,
  - internal and external communication of identified risks (reporting) resp.
  - qualifying personnel for risk management.

# Elements of risk management

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- System definition
- Risk identification
- Risk assessment / evaluation
- Measures to handle risks
- Risk monitoring

## Risks and hazards:

- Hazard exists when a situation may have adverse effects.
- Hazard is going to be a risk due to exposition
- Risk expresses the likelihood that a present hazard meets a concerned person or object
- Risk: the product of probability of occurrence of an adverse event and damage severity as a consequence of a possible occurrence of the event
- Occurrence of a risk is calculable, e.g. we can expect it



## Company/Organisation

### Strategic risks

- Market-related risks
- Competition-related risks
- Performance risks
- Management and organisational risks
- Social and ecological risks
- Financial risks

### Operational risks

- Financial risks
- HR risks
- Project or service delivery risks
- Other risks

## Risks in Heritage Management

### Utilisation

- Stakeholder risks
- Market-related risks
- Competition-related risks
- Performance-related/Service-delivery-related risks
- Management and organisational risks
- Social and ecological risks
- Financial risks

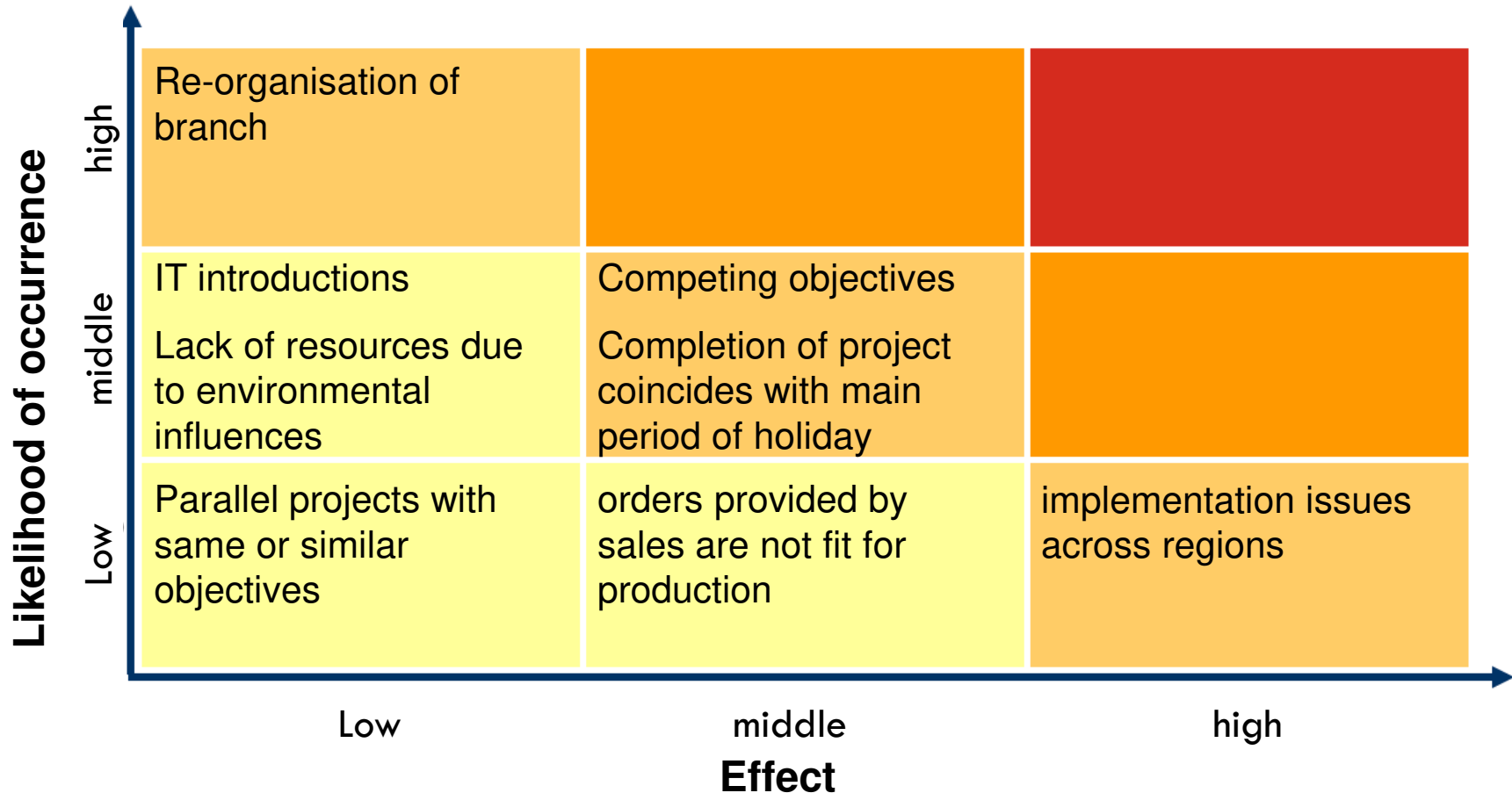
### Object

- Building risks
  - elementary events
  - significance
  - condition
  - age
  - location
- Market-related risks
- Competition-related risks
- Performance-related risks
- Ecological risks

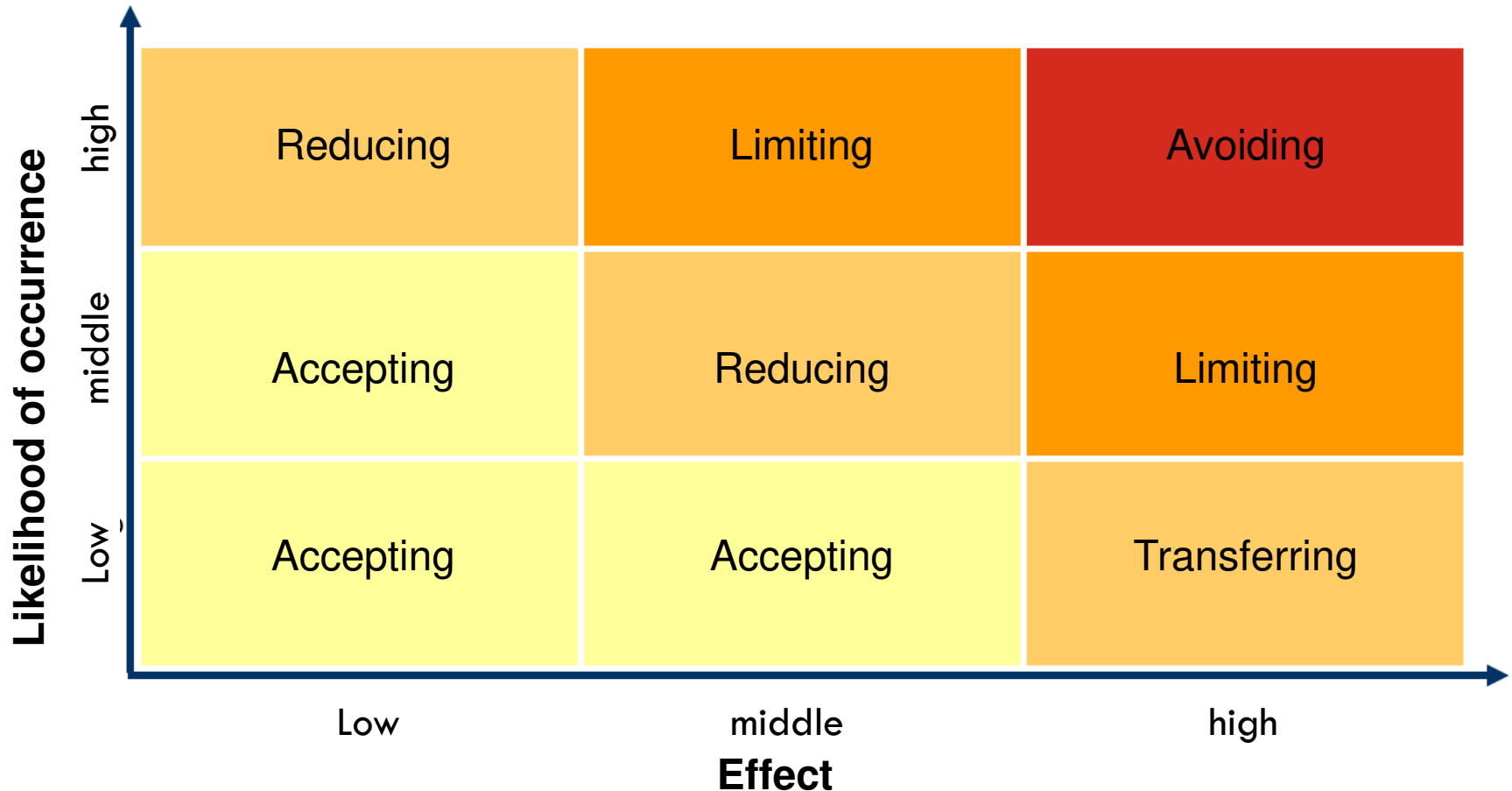
### Project / service delivery

- Stakeholder risks
- Budgetary / Financing risks
- Building damage risks
- Risks regarding
  - Allocation of resources
  - Organisational mistakes
  - Mismanagement in managing projects
  - Capability and / or willingness to control

# Risk portfolio / inventory

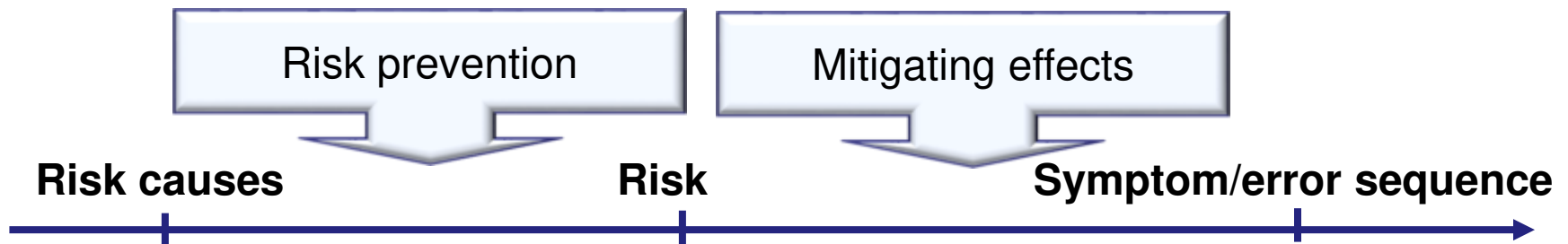


# Risk assessment/evaluation (1)



## Recognising and mitigating risks: FMEA

- Failure Mode and Effects Analysis (FMEA) is used to identify areas and determine priorities in areas where risks must be minimized
- Goal: preserving objects, buildings and projects.
- Preventing or reducing any adverse consequences if risks occur
- Implementing and documenting measures for risk reduction



## Approach:

- Listing of the object / project
- Predict severity (effect), likelihood of occurrence and detection for each risk
- Calculate the Risk priority number (RPN) by multiplying the figures for Severity, Occurrence and Detection (RPN will be between 1 und 1,000)
- Prioritise risks by their RPN (each risk above RPN of 120 has to be improved)
- Develop measures to reduce or eliminate these risks
- After completion of that measures calculate the RPN again

# Likelihood of Occurrence



| Rating | Time period            | Likelihood       |
|--------|------------------------|------------------|
| 10     | More than once per day | >30%             |
| 9      | Every 3-4 days         | 30%              |
| 8      | Once per week          | 5%               |
| 7      | Once per month         | 1%               |
| 6      | Every 3 months         | 0,03%            |
| 5      | Every 6 months         | 1 pro 10.000     |
| 4      | Once per year          | 6 pro 10.000     |
| 3      | Every 1-3 years        | 6 pro 1 million  |
| 2      | Every 3-6 years        | 3 pro 10 million |
| 1      | Every 6-100 years      | 2 per 1 billion  |



| Rating | Criteria – A failure could:   |
|--------|---|
| 10     | Injure users or passers-by  |
| 9      | Be illegal/cause controllership issues                                |
| 8      | Render the object unfit for use for a longer period of time           |
| 7      | Downtimes/unability to use causing extreme customer dissatisfaction   |
| 6      | Result in partial malfunction   |
| 5      | Cause a loss of performance, which is likely to result in a complaint |
| 4      | Cause a minor performance loss  |
| 3      | Cause a minor nuisance, but be overcome with no performance loss      |
| 2      | Go unnoticed and have only minor effect on performance                |
| 1      | Go unnoticed and not affect performance                               |



# Likelihood of detection



| Rating | Definition  |
|--------|---|
| 10     | Damage is not detectable  |
| 9      | Objects are checked on occasionally   |
| 8      | Objects are inspected with regard to specific risks                                   |
| 7      | Objects are checked on systematically   |
| 6      | Objects are checked on manually   |
| 5      | Objects are manually checked on concerning specific damage or risks                   |
| 4      | Objects are monitored and checked on manually   |
| 3      | Objects are partially monitored and checked on concerning specific damage or risks    |
| 2      | Objects are fully (100%) monitored and checked on concerning specific damage or risks |
| 1      | Damage is obvious, yet, it will not produce any harm                                  |



# FMEA



| FMEA Process                     |                             |                                |          |                               |            |   |           |                                |  |   | Action results  |          |            |           |     |
|----------------------------------|-----------------------------|--------------------------------|----------|-------------------------------|------------|---|-----------|--------------------------------|--|---|---|----------|------------|-----------|-----|
| Item / Process Step              | Potential Failure Mode      | Potential Effect(s) of Failure | Severity | Potential Cause(s) of Failure | Occurrence | Current Controls                                  | Detection | RPN                            | Recommended Action   | Responsibility and Target Completion Date | Action taken  | Severity | Occurrence | Detection | RPN |
| Order printed out in the kitchen | It does not print the order | Pizza will not be made         | 9        | No paper in the printer       | 7          | The cook checks the printer every once in a while | 5         | 315                            | Red alarm light and accustic signal in cases of paper jams or few paper left | Chef de cuisine                           | Red alarm light and accoust ic signal in cases of paper jams r few paper left | 9        | 2          | 5         | 90  |
| Total Risk priority Number       |                             |                                |          |                               |            |   |           | Resulting Risk priority Number |  |   |   |          |            |           |     |



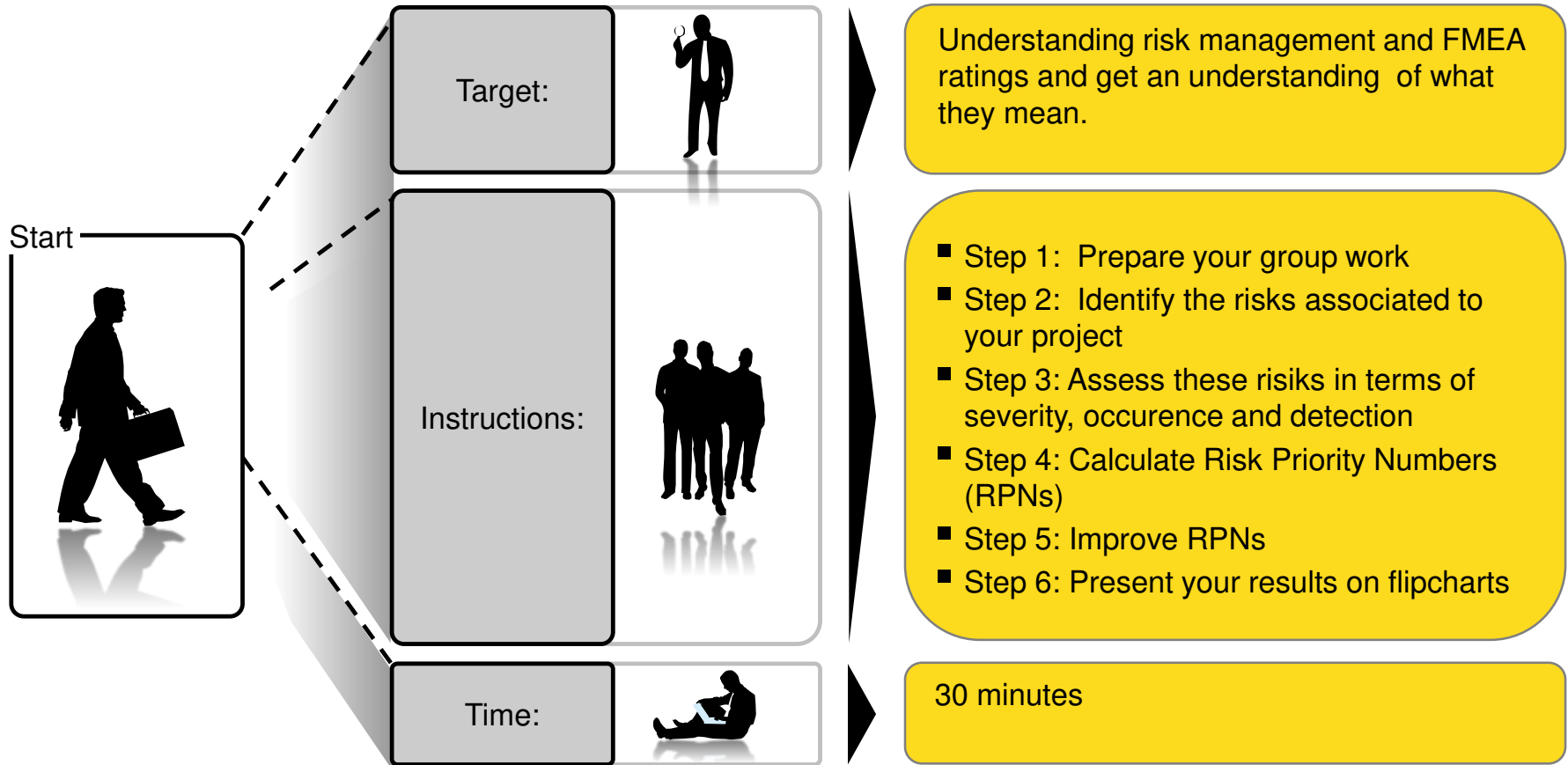
## Learning from damage

- Define reasons for (possible) damage (fire, accident, ...)
- Describe protective goods = take a look at your objects (plans, building technology, IT, access, pathways, use, users, stakeholders...)
- Describe damage
- Assess damage (costs, time, potential for restorability, .. )

## Risk management needs:

- Clearly defined tasks
- Full responsibility for clearly defined competence areas
- Clear tasks and clear instructions
- To cover only the most essential aspects
- Mutual information transfer on time and in a comprehensive manner

# Group Work



# About the author

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- Gerald Wagenhofer: UBW Unternehmensberatung Wagenhofer GmbH
- Master degree in Business Administration
- Gerald is a certified Lean Six Sigma Master Black Belt, and trained more than 500 Green and Black Belts resp. project sponsors in Lean Six Sigma methodology, Change Management and Soft Skills, like Facilitation, Meeting skills, Presentation skills. He had also trained people in Strategy and Controlling/Monitoring skills
- Gerald is working as a business consultant since 1991. The main target groups are the Public and Non-Profit sector. The projects were mainly dealing with processes and their connection to the strategies of the respective organisations



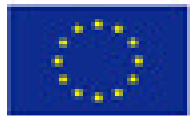
# Reference to Authors



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Erasmus+

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**U3.E5 page 23**



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# Element U3.E5: Risiko Management

## Risikomanagement Strategie



# Agenda

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U3.E6

Risk Management

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**U3.E5 page 2**

# Agenda

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|-------|----------------------------------|----|
| U3.E6 | Risk Management                  | GW |
| 1     | Learning Outcomes                | GW |
| 2     | Definition Risikomanagement      | GW |
| 3     | Risikoerfassung                  | GW |
| 4     | Risikobeurteilung/-bewertung     | GW |
| 5     | Risikoüberwachung                | GW |
| 6     | Organisatorische Voraussetzungen | GW |
| 7     | Gruppenarbeit "Anwendung FMEA"   | GW |

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# MODI-FY Learning Outcomes



| Competence                            | Level | Learning Outcomes                                    |  |   |
|---------------------------------------|-------|--|--|---|
|                                       |       | Knowledge  | Skills/ Application  | Attitude  |
| developing a risk management strategy | 5     | Risikomanagement beschreiben                         | geeignete Risikomanagement-Strategie auswählen   | bei der Entwicklung eines Risikomanagementplans sicher fühlen |
|                                       |       | Risikomanagement-Strategien benennen und beschreiben | Risikomanagement-Werkzeuge anwenden  | Notwendigkeit eines Risikomanagementplans wertschätzen        |
|                                       |       | Nutzen von Risikomanagement benennen und beschreiben | geeignete Analyse- und Aufnahmewerkzeuge für die Erarbeitung eines Risikomanagement-Plans anwenden |   |
|                                       |       | Risikomanagement-Werkzeuge benennen und beschreiben  |  |   |
|                                       |       | Entwicklung eines Risikomanagement-Plans beschreiben |  |   |
|                                       |       |  |  |   |

# MODI-FY Learning Outcomes



| Competence                              | Level | Learning Outcomes   |   |  |
|---|-------|---|---|--|
|   |       | Knowledge   | Skills/ Application   | Attitude   |
| Risikomanagementstrategie einführen     |       | Einführungsstrategien für Risikomanagement benennen und beschreiben                       | geeigneten Einführungsprozess des Risikomanagements entwickeln              | Verantwortlichkeit für Einführung und Pflege eines Risikomanagementplans akzeptieren |
|   |       | Einführungswerkzeuge für Risikomanagement benennen und beschreiben                        | geeignete Einführungswerkzeuge anwenden                                     |  |
| Risikomanagementstrategie kommunizieren |       | Kommunikation für Risikomanagement-Strategie und -Plan beschreiben                        | geeigneten Kommunikationsplan für Risikomanagement entwickeln               | Risikomanagementplan stolz kommunizieren   |
|   |       | Mittel und Werkzeuge für die Kommunikation des Riskiomanagements benennen und beschreiben | geeignete Kennzahlen für die Kommunikation des Risikomanagements entwickeln | Für den Erfolg des Risikomanagements verantwortlich fühlen                           |
|   |       | Werkzeuge zur Erfolgsmessung benennen und beschreiben                                     |   |  |

## Risikomanagement nach der Norm ISO 31000: 2009:

- „ist eine Führungsaufgabe, im Rahmen derer die Risiken einer Organisation identifiziert, analysiert und bewertet werden. Hierzu sind übergeordnete Ziele, Strategien und Politik der Organisation für das Risikomanagement festzulegen.“ (<https://de.wikipedia.org/wiki/Risikomanagement>)
- Dazu zählen
  - die Festlegung von Kriterien, nach denen die Risiken eingestuft und bewertet werden,
  - die Methoden der Risikoermittlung,
  - die Verantwortlichkeiten bei Risikoentscheidungen,
  - die Bereitstellung von Ressourcen zur Risikoabwehr,
  - die interne und externe Kommunikation über die identifizierten Risiken (Berichterstattung) sowie
  - die Qualifikation des Personals für das Risikomanagement.

# Elemente Risikomanagement

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- Systemdefinition
- Risikoerfassung
- Risikobeurteilung / -bewertung
- Maßnahmen zur Risikobewältigung
- Risikoüberwachung

## Risiko und Gefahr:

- Gefahr besteht, wenn eine Sachlage eine schädliche Wirkung haben kann.
- Gefahr durch Exposition zum Risiko
- Risiko drückt die Wahrscheinlichkeit aus, mit der eine betrachtete Person oder ein betrachteter Gegenstand auf eine Gefahr stößt.
- Risiko: Produkt aus **Eintrittswahrscheinlichkeit** eines unerwünschten Ereignisses und **Schadensschwere** als Konsequenz aus einem etwaigen Eintritt des Ereignis
- Eintreten eines Risikos ist kalkulierbar, d.h. abschätzbar



## Unternehmen/Organisation

### Strategische Risiken

- Marktrisiken
- Wettbewerbsrisiken
- Leistungsrisiken
- Führungs- und Organisationsrisiken
- Soziale und ökologische Risiken
- Finanzrisiken

### Operative Risiken

- Finanzrisiken
- Personalrisiken
- Sonstige Risiken
- Projekt- bzw. Leistungserstellungsrisiken

## Gebäude/Liegenschaft

### Nutzungsrisiken

- Stakeholder-Risiken
- Marktrisiken
- Wettbewerbsrisiken
- Leistungsrisiken
- Führungs- und Organisationsrisiken
- Soziale und ökologische Risiken
- Finanzrisiken

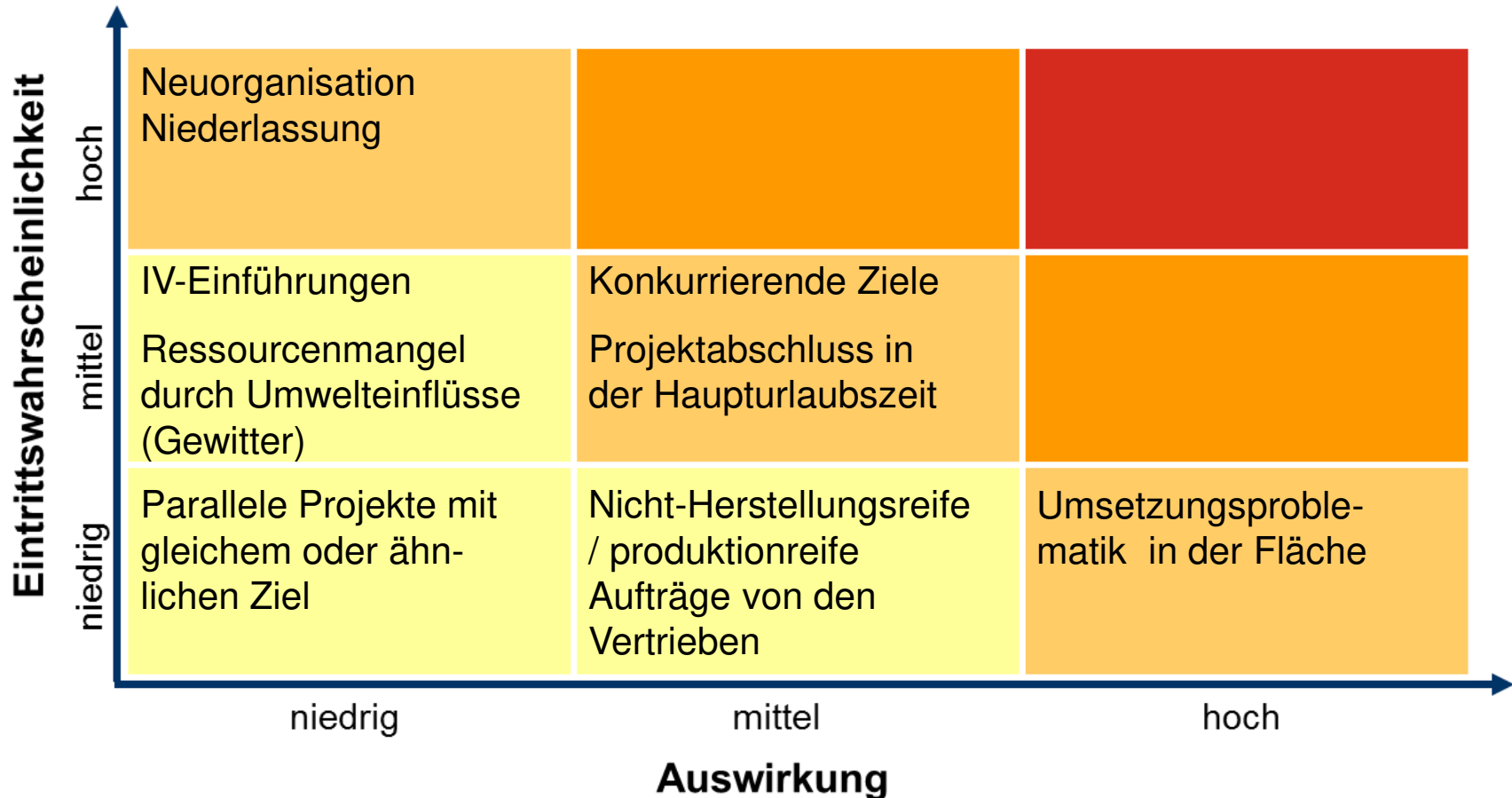
### Objektrisiken

- Gebäuderisiken
  - Elementarereignisse
  - Bedeutung
  - Zustand
  - Alter
  - Lage
- Marktrisiken
- Wettbewerbsrisiken
- Leistungsrisiken
- Ökologische Risiken

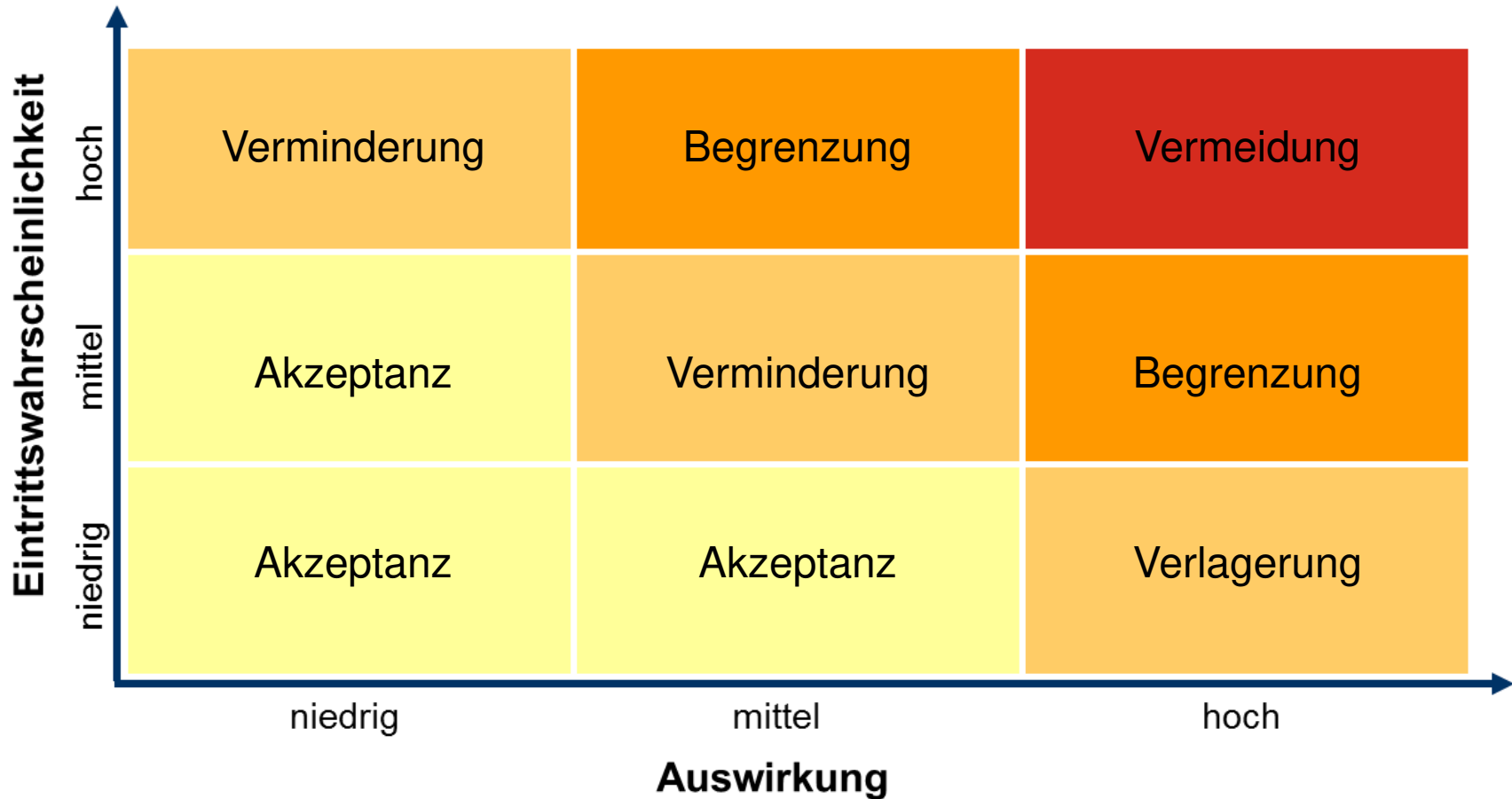
### Projekt- bzw. Leistungserstellungsrisiken

- Stakeholder-Risiken
- Budget-/Finanzierungsrisiken
- Bauschadensrisiko
- Risiken hinsichtlich
  - Ressourcenallokation
  - Organisationsfehler
  - Missmanagement im Projektmanagement
  - Steuerungsfähigkeit und/oder -wille

# Risikoportfolio/-inventar

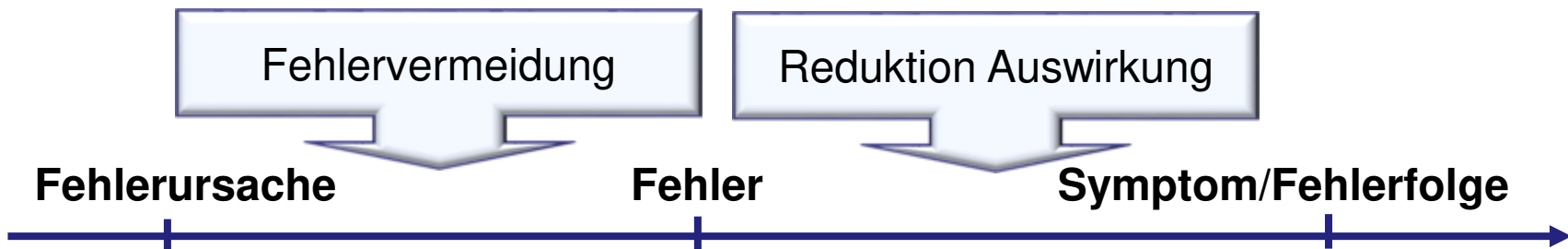


# Risikobeurteilung/-bewertung (1)



## Risikoerkennung und -absicherung: FMEA

- Die Failure Mode and Effects Analysis dient zur Identifikation und bevorzugte Behandlung von Bereichen, in denen Risiken minimiert werden müssen
- Ziel: Sicherung von Objekten, Gebäuden und Projekten.
- Verhinderung oder Reduktion der negativen Folgen eingetretener Risiken
- Durchführung und Dokumentation von Maßnahmen zur Risikoreduktion



## Vorgehensweise:

- Auflistung der Risiken für das Objekt/das Projekt
- Abschätzung der Schwere (Auswirkung), Häufigkeit und Nachweisbarkeit jedes Risikos
- Berechnung der Risiko-Prioritätszahl (RPZ) durch Multiplikation der Werte für Schwere, Häufigkeit und Nachweisbarkeit miteinander (Wert zwischen 1 und 1.000)
- Priorisierung der Risiken anhand der RPZ (jedes Risiko mit einer RPZ > 120 muss verbessert werden).
- Entwicklung von Maßnahmen zur Reduktion oder vollständigen Beseitigung von Risiken.
- Nach Durchführung dieser Maßnahmen ist die RPZ neu berechnen

# Eintrittswahrscheinlichkeit



| Einstufung | Zeitraum                 | Wahrscheinlichkeit |
|------------|--------------------------|--------------------|
| 10         | Öfter als einmal pro Tag | >30%               |
| 9          | Einmal alle 3-4 Tage     | 30%                |
| 8          | Einmal pro Woche         | 5%                 |
| 7          | Einmal pro Monat         | 1%                 |
| 6          | Alle 3 Monate            | 0,03%              |
| 5          | Alle 6 Monate            | 1 pro 10.000       |
| 4          | Einmal pro Jahr          | 6 pro 10.000       |
| 3          | Alle 1-3 Jahre           | 6 pro 1 Million    |
| 2          | Alle 3-6 Jahre           | 3 pro 10 Millionen |
| 1          | Alle 6-100 Jahre         | 2 pro 1 Milliarde  |



| <b>Einstufung</b> | <b>Kriterien – Ein Risikoeintritt kann:</b>  |
|-------------------|--|
| 10                | Die Verletzung von NutzerInnen oder/und PassantInnen verursachen                     |
| 9                 | Erhebliche Grund für Probleme mit der Kontrollinstanz sein                           |
| 8                 | Objekt für längere Zeit unbrauchbar macht  |
| 7                 | Nutzungsausfällen führen, die zu sehr große NutzerInnen-Unzufriedenheit führt        |
| 6                 | Teilweise Fehlfunktionen hervorrufen   |
| 5                 | Nutzungsminderung verursachen, die zu vereinzelt NutzerInnen-Reklamation führen kann |
| 4                 | Geringfügige Nutzungsbeeinträchtigungen mit sich bringen                             |
| 3                 | Einen ohne Nutzungsbeeinträchtigung behebbaren Schaden sein                          |
| 2                 | Unbemerkt bleiben, mit unwesentlichem Einfluss auf die Nutzung                       |
| 1                 | Unbemerkt bleiben, ohne Beeinträchtigung der Nutzung                                 |







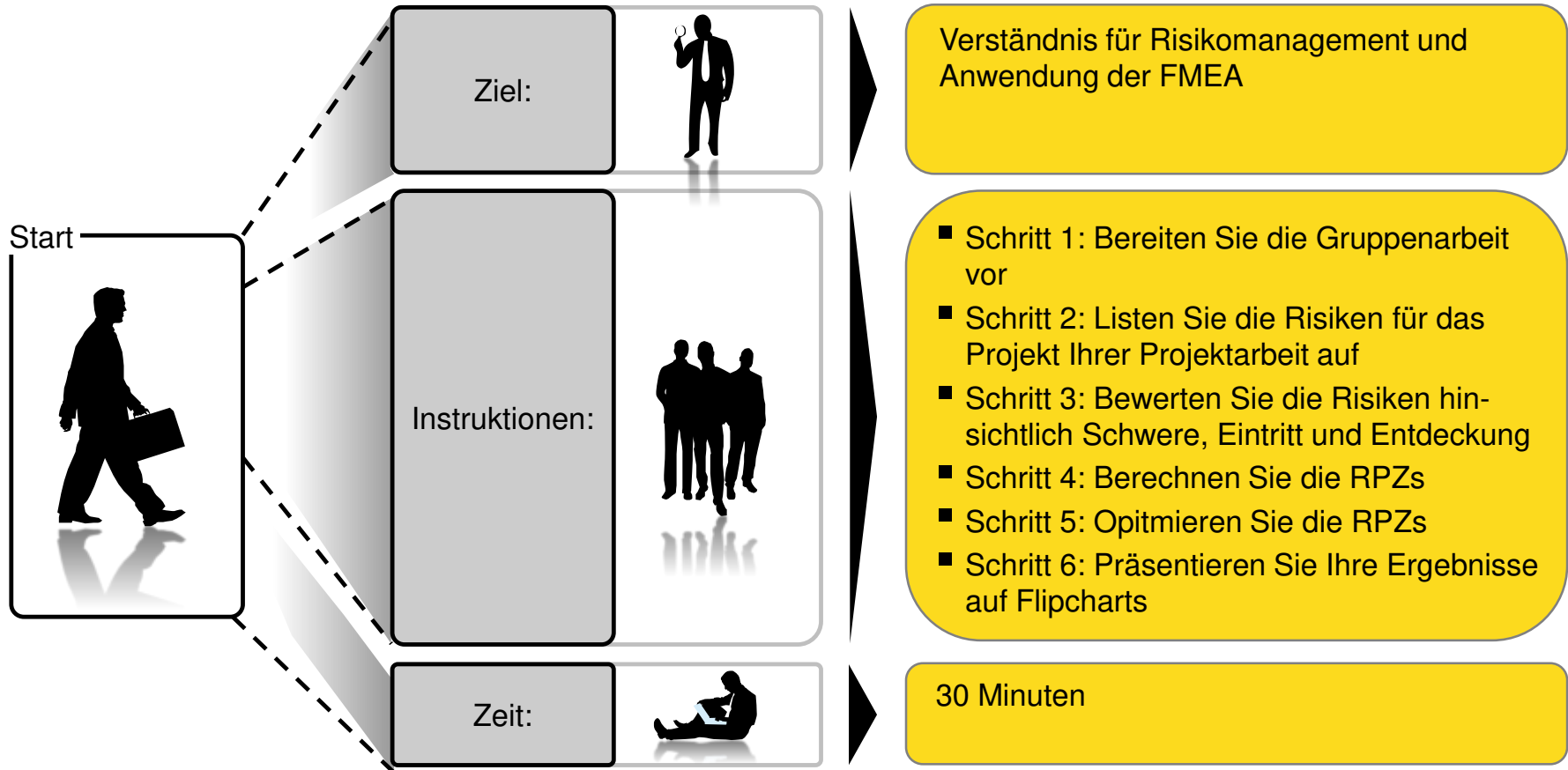
| <b>Einstufung</b> | <b>Definition</b>  |
|-------------------|--|
| 10                | Der Eintritt eines Schadens ist nicht nachweisbar                        |
| 9                 | Objekte werden gelegentlich überprüft                                    |
| 8                 | Objekte werden gelegentlich auf Eintritt dieses Risikos überprüft        |
| 7                 | Objekte werden systematisch überprüft                                    |
| 6                 | Objekte werden manuell überprüft   |
| 5                 | Objekte werden manuell auf Eintritt dieses Risikos überprüft             |
| 4                 | Objekt wird teilweise überwacht und manuell überprüft                    |
| 3                 | Objekt wird teilweise überwacht mit sofortiger Reaktion auf Abweichungen |
| 2                 | Objekt wird zu 100% überwacht mit sofortiger Reaktion auf Abweichungen   |
| 1                 | Der Eintritt ist offensichtlich, aber keine Beeinträchtigung             |

| FMEA Prozess                      |                             |                           |         |                        |            |                                      |          |                                    |   |  | Ergebnis der Maßnahme                               |         |   |            |    |          |   |
|-----------------------------------|-----------------------------|---------------------------|---------|------------------------|------------|--------------------------------------|----------|------------------------------------|---|--|---|---------|---|------------|----|----------|---|
| Art./Prozess Schritt              | Fehler-möglichkeit          | Möglicher Fehlereinfluss  | Schwere | Mögliche Fehlergründe  | Häufigkeit | derzeitige Kontrollen                | Nachweis |                                    | Empfohlene Maßnahme                                 | Verantwortung und geplantes Fertigstellungsdatum | Ergriffene Maßnahme                                 | Schwere |   | Häufigkeit |    | Nachweis |   |
|                                   |                             |                           |         |                        |            |                                      | bauzeit  | RPZ                                |   |  |   | R       | H | R          | H  | R        | H |
| Druck der Bestellung in der Küche | Auftrag wird nicht gedruckt | Pizza wird nicht gebacken | 9       | Kein Papier im Drucker | 7          | Koch überprüft den Drucker ab und zu | 5        | 315                                | Rote Warnlampe & Akust. Signal bei Papierstand min. | Küchenchef                                       | Rote Warnlampe & Akust. Signal bei Papierstand min. | 9       | 2 | 5          | 90 |          |   |
|                                   |                             |                           |         |                        |            |                                      |          |                                    |   |  |   |         |   |            |    |          |   |
| Gesamt Risikoprioritätszahl       |                             |                           |         |                        |            |                                      |          | Resultierende Risikoprioritätszahl |   |  |   |         |   |            |    |          |   |

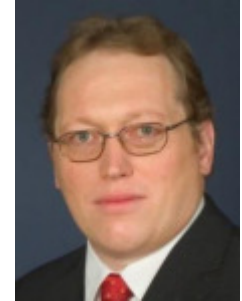
## Lernen aus Schäden

- Schadensursache definieren (Brand, Unfall, ...)
- Schutzgüter beschreiben = ein Blick auf die Objekte (Pläne, Haustechnik, EDV, Zugang, Wege, Nutzung, NutzerInnen, Stakeholder...)
- Schäden beschreiben
- Schäden bewerten (Kosten, Zeit, Restaurierungsfähigkeit, .. )

# Gruppenarbeit



- Gerald Wagenhofer: UBW Unternehmensberatung Wagenhofer GmbH
- Master in Betriebswirtschaftslehre
- Gerald ist ein zertifizierter Lean Six Sigma- Master Black Belt hat mehr als 500 Green und Black Belts in der Lean Six Sigma Methodik, Change Management und Soft Skills-Fähigkeiten, wie Facilitation, Meeting skills, Präsentation, geschult. Er hat auch Menschen in Strategie und Controlling- / Monitoringfähigkeiten ausgebildet.
- Gerald ist seit 1991 als Unternehmensberater tätig. Hauptzielgruppen sind der Öffentliche und der Non-Profit Sektor. Die Projekte befassten sich hauptsächlich mit Prozessen und deren Zusammenhang mit den Strategien der jeweiligen Organisationen.



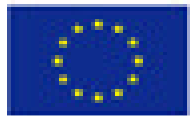
# Referenzen des Autors



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Erasmus+

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**Authors: MODI-FY Project team**

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**U3.E5 page 27**



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# Element U3.E5: Risicomangement

## Risicomangementstrategie





# Agenda

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U3.E5 Risicomangement

GW

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**U3.E5 page 2**

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## U3.E5 Risicomanagement

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1      Leeruitkomsten

GW

2      Definitie van risicomanagement

GW

3      Risico identificatie

GW

4      Risicoanalyse en evaluatie

GW

5      Risico onderzoek

GW

6      Organisatorische pre-condities

GW

7      Groepswerk “FMEA toepassen”

GW

| Competentie                                     | Level | Leeruitkomsten   |  |  |
|---|-------|--|--|--|
|   |       | Kennis   | Vaardigheden/toepassing  | Aanpak   |
| Een strategie voor risicomanagement ontwikkelen | 5     | Omschrijf risicomanagement                             | Selecteer de gepaste strategie voor risicomanagement                                   | Voel je zelfzeker tijdens het ontwikkelen van een risicomanagementplan |
|   |       | Benoem en beschrijf strategieën voor risicomanagement  | Pas hulpmiddelen voor risicomanagement toe   | Apprecieer de waarde van een risicomanagementplan                      |
|   |       | Benoem en beschrijf voordelen door risicomanagement    | Pas de gepaste analyse en hulpmiddelen toe om een risicomanagementplan klaar te maken. |  |
|   |       | Benoem en omschrijf hulpmiddelen voor risicomanagement |  |  |
|   |       | Omschrijf de ontwikkeling van een risicomanagementplan |  |  |
|   |       |  |  |  |

| Competentie                                     | Level | Leeruitkomsten   |   |  |
|---|-------|--|---|--|
|   |       | Kennis   | Vaardigheden/toepassing   | Aanpak   |
| Implementatie van een risicomanagementstrategie |       | Benoem en beschrijf manieren om een risicomanagementstrategie te implementeren     | Ontwikkel een gepast proces voor de implementatie van het plan                | De verantwoordelijkheid aanvaarden voor het implementeren van een risicomanagementplan |
|   |       | Benoem en beschrijf hulpmiddelen om een risicomanagementstrategie te implementeren | Gebruik gepaste toepassingshulpmiddelen                                       |  |
| Communiceren van een risicomanagementstrategie  |       | Omschrijf de communicatie van het risicomanagementplan                             | Ontwikkel een degelijk risicomanagement & communicatieplan                    | Je trots voelen voor het gebruiken van je plan   |
|   |       | Benoem en beschrijf communicatiemiddelen   | Ontwikkel een degelijk risicomanagementplan en communicatiemaatregelen (KPIs) | Je verantwoordelijk voelen voor het succes van je plan                                 |
|   |       | Benoem en beschrijf middelen om succes te meten                                    |   |  |

## Risicomanagement (ISO 31000: 2009):

- “Is een managementfunctie die draait rond het identificeren, analyseren en inschatten van risico’s. Hiervoor zal het hoge doelen, strategieën en een beleid bepalen voor het risicobeheer van een organisatie.”

(<https://de.wikipedia.org/wiki/Risikomanagement> )

- Hierbij hoort ook:
  - Criteria uiteenzetten voor het bepalen en evalueren van risico’s
  - Methoden om risico’s te determineren
  - Verantwoordelijkheid voor beslissingen over risicomanagement
  - Hulpmiddelen aanbieden voor risicopreventie
  - Interne en externe communicatie over bekende risico’s
  - Personeel opleiden voor risicomanagement

# Elementen van risicomangement

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- Definitie van het systeem
- Risicoidentificatie
- Risicobepaling/evaluatie
- Maatregelen voor risico's
- Risicocontrole

## Risico's en gevaren:

- Gevaren bestaan wanneer een situatie slechte effecten kan uitoefenen.
- Gevaar zal een risico worden door blootstelling.
- Risico's drukken de kans op een interactie tussen gevaar en een persoon of object.
- Risico: het product van mogelijkheid dat negatieve effecten en schade voortkomen als consequentie van een gebeurtenis.
- De kans dat een risico zich zal manifesteren kan men berekenen

## Bedrijf/organisatie

### Strategischer risico's

- Marktgerelateerde risico's
- Competitiegerelateerde risico's
- Functioneringsrisico's
- Management- en organisatorische risico's
- Sociale en ecologische risico's
- Financiële risico's

### Operationele risico's

- Financiële risico's
- HR risico's
- Project- of dienst risico's bij aflevering
- Andere risico's



## Risico's voor erfgoedbeheer

### Gebruik

- Risico's voor partners
- Marktgerelateerde risico's
- Competitiegerelateerde risico's
- Functionerings- en afleveringsgerelateerde risico's
- Management- en organisatorische risico's
- Sociale en ecologische risico's
- Financiële risico's

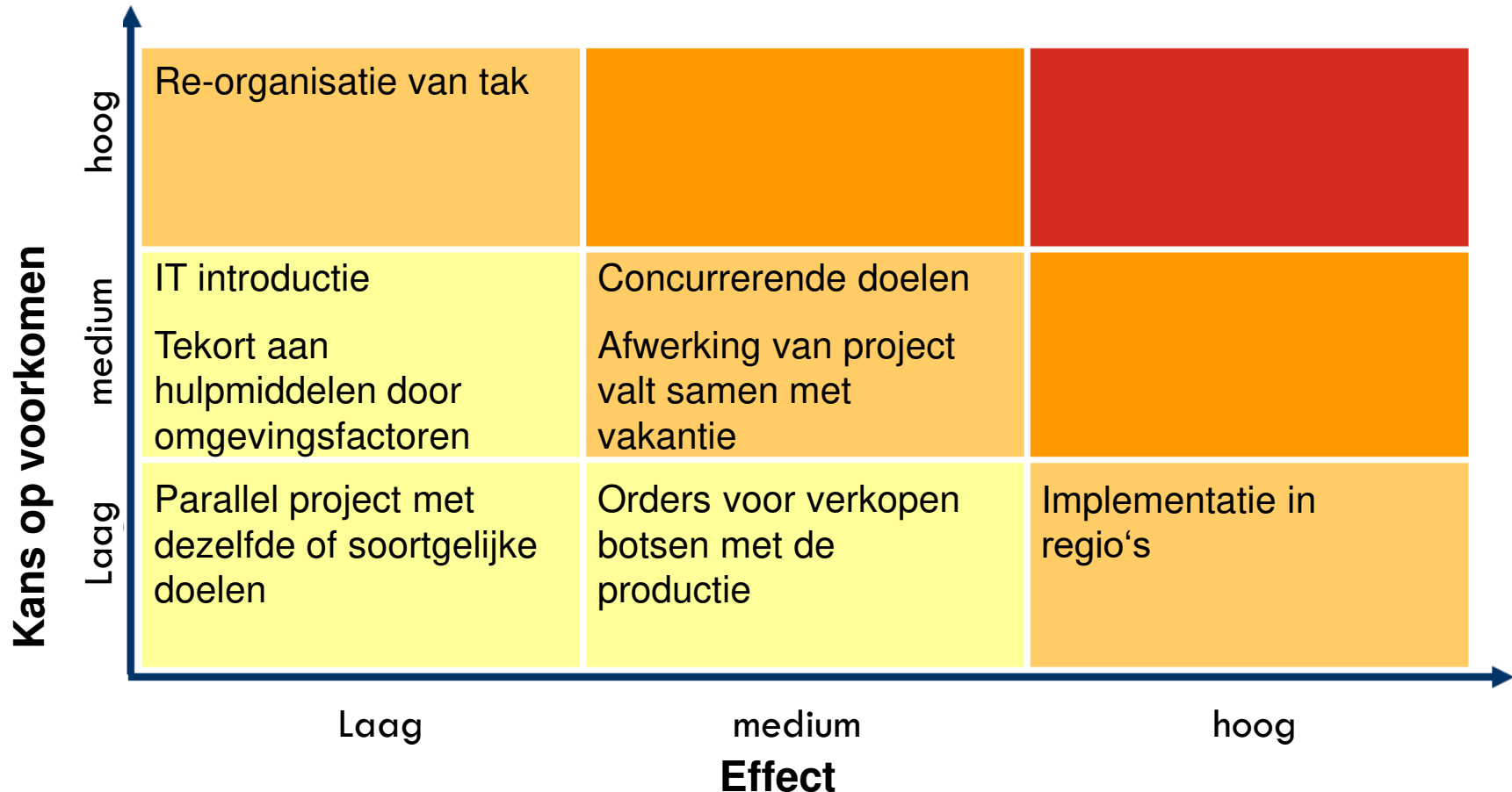
### Object

- Risico voor het gebouw
  - Elementaire gebeurtenissen
  - Belang
  - Conditie
  - Leeftijd
  - Locatie
- Marktgerelateerde risico's
- Competitiegerelateerde risico's
- Functioneringsrisico's
- Ecologische risico's

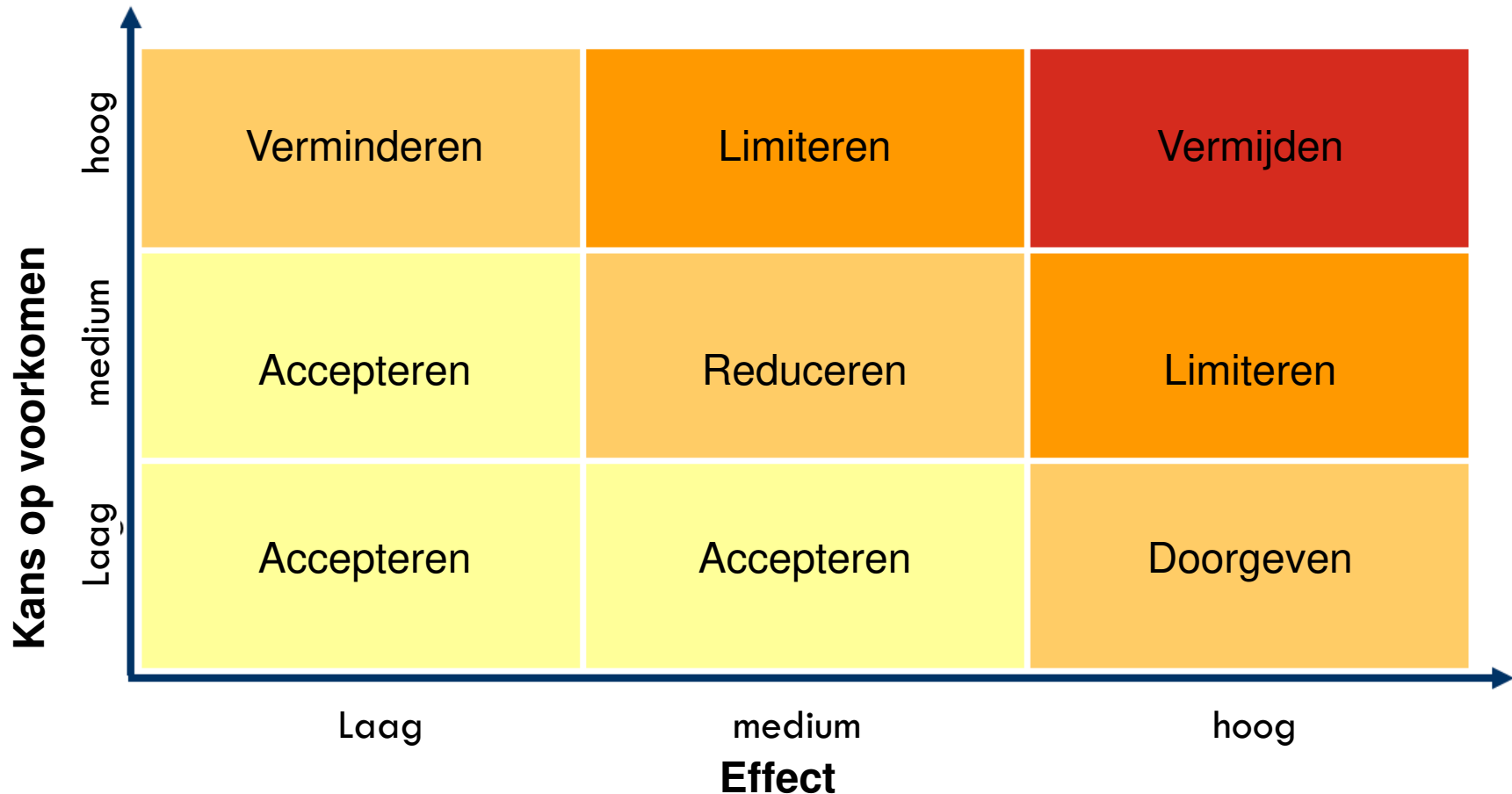
### Aflevering van project/dienst

- Risico's voor partners
- Budget/financiële risico's
- Risico's voor schade aan het gebouw
- Risico's inzake:
  - Toezegging van hulpmiddelen
  - Organisatorische fouten
  - Wanbeheer
  - Mogelijkheid en bereidheid om te controleren

# Risicoportfolio/inventaris

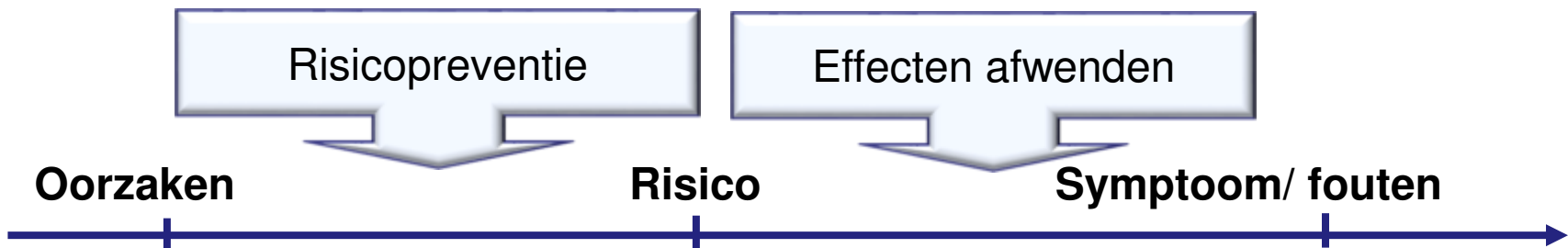


# Risicobeoordeling/ evaluatie (1)



## Risico's herkennen en afwenden: FMEA

- Failure Mode and Effects Analysis (FMEA) gebruikt men om risico's te identificeren en om de prioriteit van risico's te bepalen.
- Doel: objecten, projecten en gebouwen preserveeren.
- Negatieve consequenties voorkomen of reduceren
- Maatregelen voor risicodetectie implementeren en documenteren



## Aanpak:

- Het object/ project oplijsten
- Voorspel de ernst (effect), kans op voorkomen en detectie van alle risico's
- Bereken het Risk Priority Number (RPN) door de factoren ernst, kans op voorkomen en detectie te vermenigvuldigen (RPN kan tussen 1 en 1000 bedragen)
- Prioritiseer risico's volgens hun RPN (Risico's met een RPN boven 120 moeten verbeterd worden)
- Ontwikkel maatregelen om deze risico's te reduceren of elimineren
- Bereken na deze maatregelen opnieuw het RPN

# Kans op voorkomen



| Rating | Periode               | Kans             |
|--------|-----------------------|------------------|
| 10     | Meer dan eens per dag | >30%             |
| 9      | Elke 3-4 dagen        | 30%              |
| 8      | 1 maal per week       | 5%               |
| 7      | 1 maal per maand      | 1%               |
| 6      | Iedere 3 maanden      | 0,03%            |
| 5      | Iedere 6 maanden      | 1 pro 10.000     |
| 4      | Elk jaar              | 6 pro 10.000     |
| 3      | Elke 3 jaar           | 6 pro 1 million  |
| 2      | Elke 3-6 jaar         | 3 pro 10 million |
| 1      | Elke 6-100 jaar       | 2 per 1 billion  |



| Rating | Criteria – falen kan:   |
|--------|---|
| 10     | Gebruikers of bezoekers verwonden   |
| 9      | Illegaal zijn/controleproblemen veroorzaken                                       |
| 8      | Het object onbruikbaar maken voor een lange periode                               |
| 7      | Een panne met een zeer slechte ervaring voor klanten                              |
| 6      | Resulteren in een storing   |
| 5      | Zorgen voor een prestatieverlies, waaruit waarschijnlijk een klacht zal voorkomen |
| 4      | Zorgen voor een kleine prestatievermindering                                      |
| 3      | Veroorzaakt een beperkte hinder maar kan opgelost worden zonder prestatieverlies  |
| 2      | Onopgemerkt voorkomen en heeft maar een beperkt effect op de prestatie            |
| 1      | Onopgemerkt voorkomen en zal geen effect hebben                                   |

# Waarschijnlijkheid van detectie



| Rating | Definitie  |
|--------|--|
| 10     | Schade kan niet opgemerkt worden   |
| 9      | Objecten worden regelmatig gecontroleerd   |
| 8      | Objecten worden voor specifieke risico's nagekeken                                       |
| 7      | Objecten worden systematisch nagekeken   |
| 6      | Objecten worden manueel nagekeken  |
| 5      | Objecten worden manueel nagekeken voor specifieke schade of risico's                     |
| 4      | Objecten worden manueel opgevolgd en nagekeken   |
| 3      | Objecten worden deels opgevolgd en nagekeken voor specifieke schade en risico's          |
| 2      | Objecten worden grondig (100%) opgevolgd en nagekeken voor specifieke schade en risico's |
| 1      | De schade kan gezien worden maar zorgt voor geen gevaar                                  |





| FMEA Process                                     |                        |                                  |          |                               |            |   |           |                                |   |   | Action results  |          |            |           |     |
|--|------------------------|----------------------------------|----------|-------------------------------|------------|---|-----------|--------------------------------|---|---|---|----------|------------|-----------|-----|
| Item / Process Step                              | Potential Failure Mode | Potential Effect(s) of Failure   | Severity | Potential Cause(s) of Failure | Occurrence | Current Controls  | Detection | RPN                            | Recommended Action  | Responsibility and Target Completion Date | Action taken  | Severity | Occurrence | Detection | RPN |
| Bestelling komt aan in de keuken via een printer | De printer werkt niet  | De pizza zal niet gemaakt worden | 9        | Geen papier in de printer     | 7          | Het personeel gaat af en toe na of er genoeg papier in de printer zit | 5         | 315                            | Een rood lampje en geluidsignaal wanneer er een probleem voorkomt met het papier. | Chef de cuisine                           | Een rood lampje en geluidsignaal wanneer er een probleem voorkomt met het papier. | 9        | 2          | 5         | 90  |
| Total Risk priority Number                       |                        |                                  |          |                               |            |   |           | Resulting Risk priority Number |   |   |   |          |            |           |     |

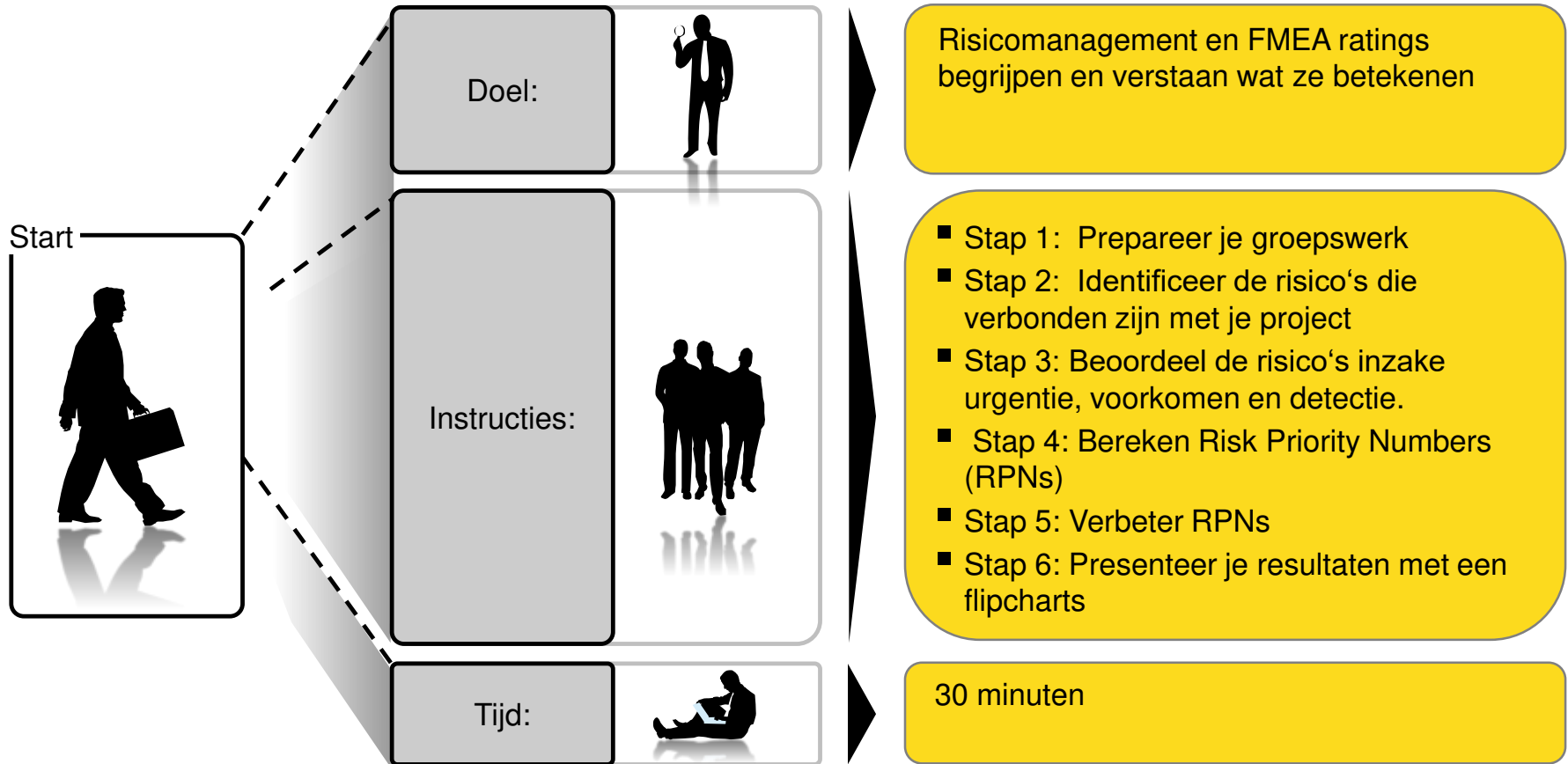
## Leren door schade

- Definieer redenen voor (mogelijke) schade (brand, accident)
- Beschrijf beschermde goederen, kijk naar objecten (plannen, technologie, IT, toegang, gebruik, ...)
- Beschrijf schade
- Beoordeel de schade (kosten, tijd, mogelijkheid voor restauratie)

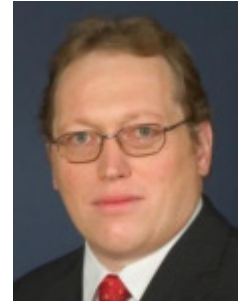
## Noden voor risicomanagement:

- Taken met een duidelijke uitleg
- Volledige verantwoordelijkheid voor duidelijk gedefinieerde competenties
- Duidelijke taken en instructies
- Behandelen van enkel de meest essentiële aspecten
- Een wederzijdse, punctuele uitwisseling van informatie

# Group Work



- Gerald Wagenhofer: UBW Unternehmensberatung Wagenhofer GmbH
- Master in bedrijfsbeheer
- Gerald is een gecertificeerde Lean Six Sigma Master Black Belt, en heeft meer dan 500 Green and Black Belts getraind, resp. project sponsors voor Lean Six Sigma methodologie, Change Management and Soft Skills, like Facilitation, Meeting skills, Presentation skills. Hij heeft ook mensen getraind voor Strategy en Controlling/Monitoring vaardigheden.
- Gerald werkt als bedrijfsconsultant sinds 1991. Hij richt zich vooral op de publieke en non-profit sector. De projecten gingen vooral over processen en hun connecties met de strategieën van de respectievelijke organisaties.



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# Element U4.E7: Risk Management

## Risk Management Strategy





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U4.E7 Risk Management

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## U4.E7 Risk Management

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GW

1 Learning Outcomes

GW

2 Definition Risk management

GW

3 Risk identification

GW

4 Risk assessment / -evaluation

GW

5 Risk surveillance

GW

6 Organisational pre-condition

GW

7 Group work "Apply FMEA"

GW

# MODI-FY Tanulási eredmények (1)



| Competence                            | Level | Learning Outcomes                                  |  |   |
|---------------------------------------|-------|--|--|---|
|                                       |       | Knowledge  | Skills/ Application  | Approach  |
| developing a risk management strategy | 5     | describe risk management                           | select appropriate risk management strategy                                      | feel confident in developing a risk management plan |
|                                       |       | name and describe risk management strategies       | apply risk management tools  | appreciate the value of risk management plan        |
|                                       |       | name and describe benefits of risk management      | apply appropriate analysis and recording tools to prepare a risk management plan |   |
|                                       |       | name and describe risk management tools            |  |   |
|                                       |       | describe the development of a risk management plan |  |   |

# MODI-FY Tanulási eredmények (2)



| Competence                             | Level | Learning Outcomes   |   |  |
|--|-------|---|---|--|
|  |       | Knowledge   | Skills/ Application   | Approach   |
| implementing risk management strategy  |       | name and describe risk management implementation strategies                   | developing an appropriate risk management implementing process                      | Accept responsibility for implementing and living a risk management plan |
|  |       | name and describe risk management implementation tools                        | apply appropriate implementation tools  |  |
|  |       |   |   |  |
| communicating risk management strategy |       | describe dissemination and communication of risk management strategy and plan | develop appropriate risk management dissemination and communication plan            | Feel proud to communicate risk management plan                           |
|  |       | name and describe dissemination and communication means and tools             | develop appropriate risk management dissemination and communication measures (KPIs) | Feel responsible for success of risk management                          |
|  |       | name and describe success measuring tools                                     |   |  |

## Kockázatkezelés (ISO 31000: 2009):

- „egy menedzsment feladat, amely egy szervezet kockázatainak azonosítása, elemzése és felmérése köré szerveződik. E célból magas szintű célkitűzéseket, stratégiákat és politikákat fogalmaz meg a szervezet kockázatkezelésére.” (<https://de.wikipedia.org/wiki/Risikomanagement> )
- Ebbe beletartozik
  - a kockázatok felmérési és értékelési kritériumainak beállítása / meghatározása,
  - kockázat meghatározási módszerek,
  - kockázatkezeléssel kapcsolatos döntési felelősségek,
  - források nyújtása kockázat-megelőzés céljából
  - az azonosított kockázatok belső és külső kommunikációja (riportolás) ill.
  - személyzet minősítése a kockázatkezelésre.

# A kockázatkezelés elemei

---



- Rendszerleírás
- Kockázat azonosítás
- Kockázatértékelés / értékelés
- A kockázatok kezelése
- Kockázatfigyelés

## Kockázatok és veszélyek:

- Veszély áll fenn, ha a helyzet káros hatással járhat.
- A veszély az expozíció miatt kockázatot jelent
- Kockázat kifejezi a valószínűsége annak, hogy a jelenlegi veszély találkozik egy érintett személy vagy tárgy
- Kockázat: a termék a valószínűségét a kedvezőtlen esemény és sérülés súlyossága következtében egy esetleges esemény bekövetkezése
- Előfordulása egy kockázat kiszámítható, így például azt várhatjuk, hogy

## Cég / Szervezet

### Stratégiai kockázatok

- Piaci kockázatok
- Versennyel kapcsolatos kockázatok
- Teljesítmény kockázatok
- Vezetői és szervezeti kockázatok
- Szociális és ökológiai kockázatok
- Pénzügyi kockázatok

### Operatív kockázatok

- Pénzügyi kockázatok
- HR kockázatok
- Projekt vagy szolgáltatás szállítási kockázat
- Egyéb kockázatok



## Az örökség kezelésével kapcsolatos kockázatok

### Hasznosítás

- Az érdekeltek kockázata
- Piaci kockázatok
- Versennyel kapcsolatos kockázatok
- Teljesítményhez kapcsolódó / szolgáltatás-szállítással kapcsolatos kockázatok
- Vezetői és szervezeti kockázatok
- Szociális és ökológiai kockázatok
- Pénzügyi kockázatok

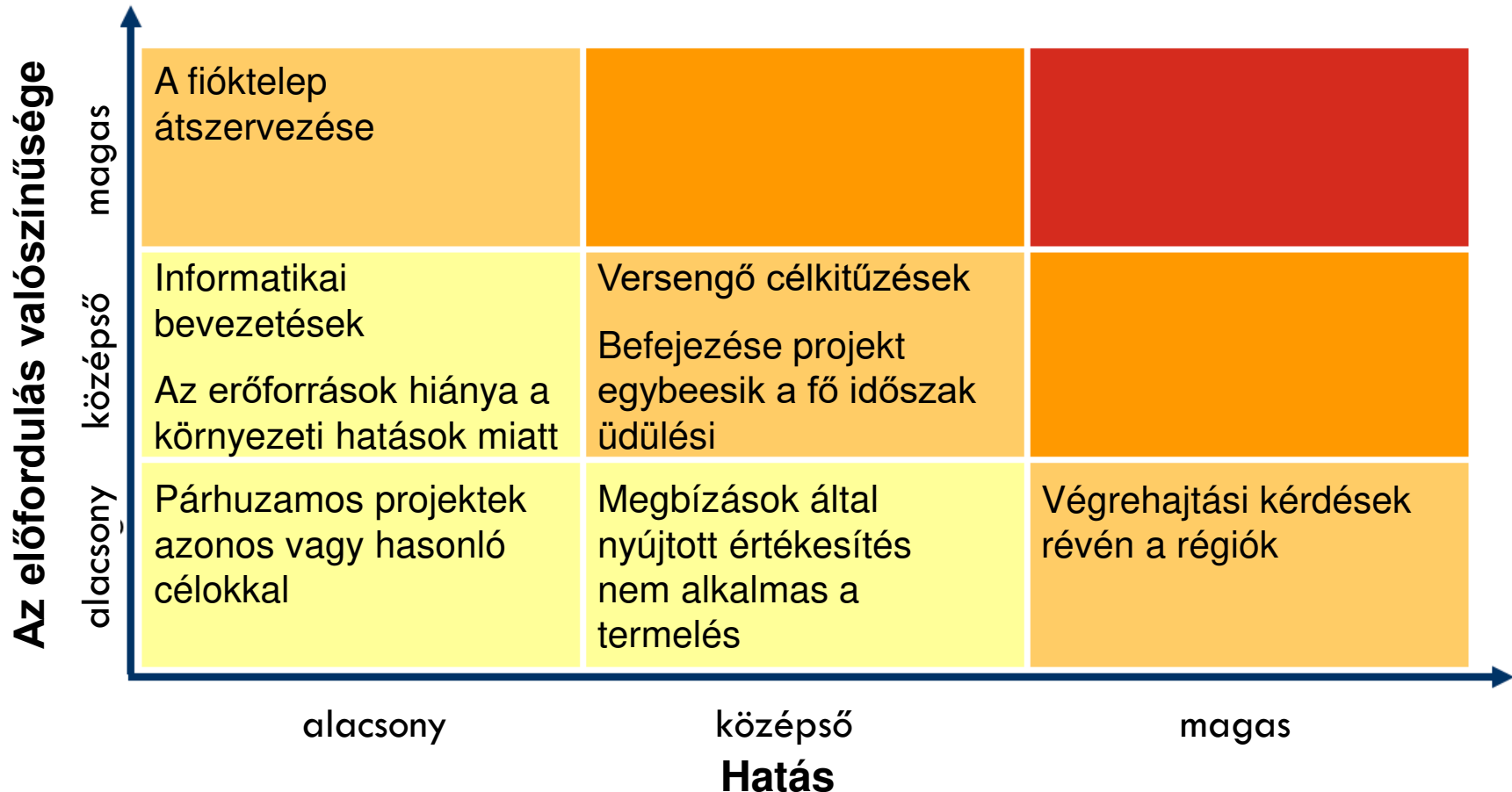
### Tárgy

- Építési kockázatok
  - elemi események
  - jelentőség
  - feltétel
  - kor
  - elhelyezkedés
- Piaci kockázatok
- Versennyel kapcsolatos kockázatok
- Teljesítményre vonatkozó kockázatok
- Ökológiai kockázatok

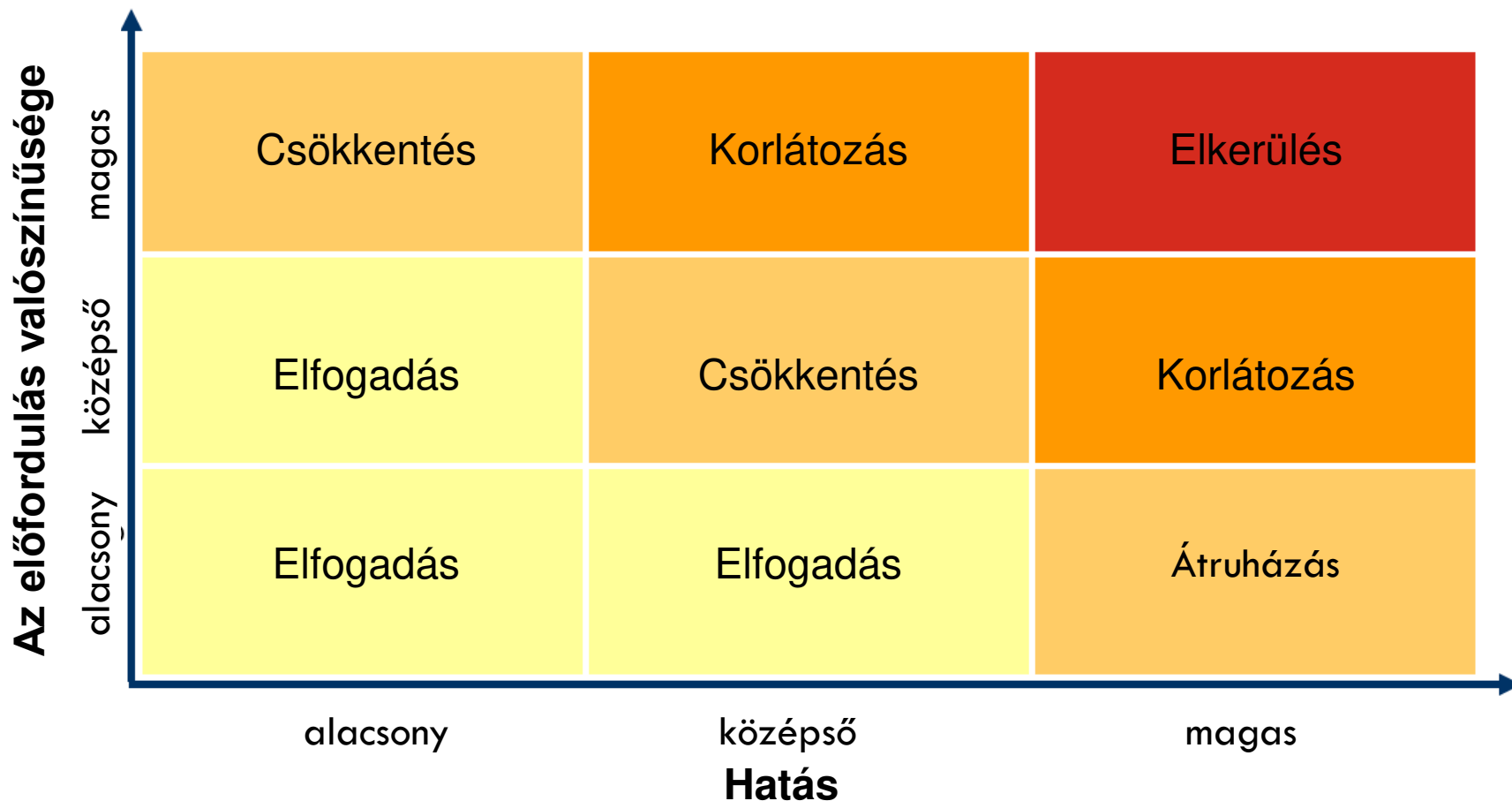
### Projekt / szolgáltatás szállítás

- Az érdekeltek kockázata
- Költségvetési / finanszírozási kockázatok
- Építési károk kockázata
- kapcsolatos kockázatok
  - Az erőforrások elosztása
  - Szervezeti hibák
  - A projektek irányításával kapcsolatos rossz irányítás
  - Képesség és / vagy szándék, hogy ellenőrizzék

# Kockázati portfólió / készlet

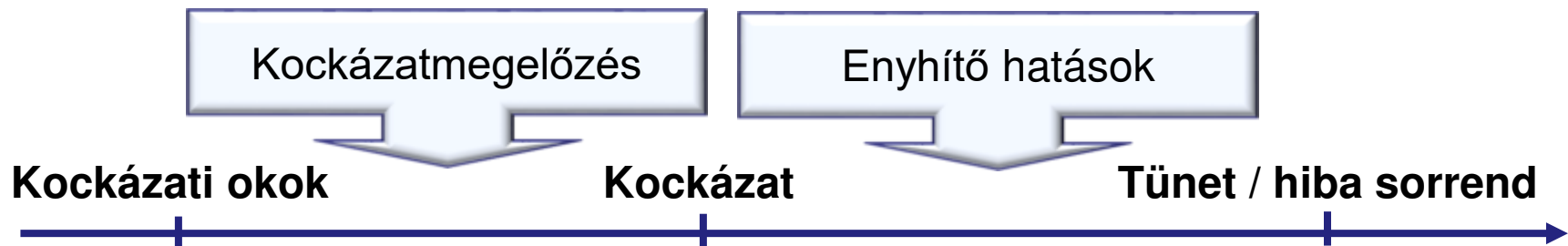


# Kockázateértékelés / értékelés(1)



## A kockázatok felismerése és mérséklése: FMEA

- A hibamód és hatáselemzés (FMEA) a területek azonosítására és a prioritások meghatározására szolgál azokon a területeken, ahol a kockázatokat minimálisra kell csökkenteni
- Cél: megőrizve tárgyakat, épületeket és a projekteket.
- A kockázatok elkerülése vagy csökkentése
- A kockázatcsökkentésre vonatkozó intézkedések végrehajtása és dokumentálása



## Megközelítés:

- Listing tárgy / projekt
- A súlyosságot (hatás), az esetleges előfordulási és észlelési valószínűségeket minden kockázatra vonatkozóan meg kell becsülni
- Számítsd ki a kockázati prioritási számot (RPN) a súlyosság, az előfordulás és az észlelés számainak szorzatával (az RPN 1 és 1000 közötti lesz)
- A kockázatok a saját RPN-jük előtt kell kiemelten kezelni (minden egyes RPN 120-as feletti kockázatot javítani kell)
- Az ilyen kockázatok csökkentésére vagy megszüntetésére irányuló intézkedések kidolgozása
- Befejezése után, hogy az intézkedések kiszámításához RPN újra

# Az előfordulás valószínűsége

A vertical arrow pointing downwards, with a color gradient from red at the top to green at the bottom, indicating a scale of likelihood or frequency.


| Rating | Time period            | Likelihood       |
|--------|------------------------|------------------|
| 10     | More than once per day | >30%             |
| 9      | Every 3-4 days         | 30%              |
| 8      | Once per week          | 5%               |
| 7      | Once per month         | 1%               |
| 6      | Every 3 months         | 0,03%            |
| 5      | Every 6 months         | 1 pro 10.000     |
| 4      | Once per year          | 6 pro 10.000     |
| 3      | Every 1-3 years        | 6 pro 1 million  |
| 2      | Every 3-6 years        | 3 pro 10 million |
| 1      | Every 6-100 years      | 2 per 1 billion  |

# A súlyosság



| Rating | Criteria – A failure could:   |
|--------|---|
| 10     | Injure users or passers-by  |
| 9      | Be illegal/cause controllership issues                                |
| 8      | Render the object unfit for use for a longer period of time           |
| 7      | Downtimes/unability to use causing extreme customer dissatisfaction   |
| 6      | Result in partial malfunction   |
| 5      | Cause a loss of performance, which is likely to result in a complaint |
| 4      | Cause a minor performance loss  |
| 3      | Cause a minor nuisance, but be overcome with no performance loss      |
| 2      | Go unnoticed and have only minor effect on performance                |
| 1      | Go unnoticed and not affect performance                               |





| Rating | Definition  |
|--------|---|
| 10     | Damage is not detectable  |
| 9      | Objects are checked on occasionally   |
| 8      | Objects are inspected with regard to specific risks                                   |
| 7      | Objects are checked on systematically   |
| 6      | Objects are checked on manually   |
| 5      | Objects are manually checked on concerning specific damage or risks                   |
| 4      | Objects are monitored and checked on manually   |
| 3      | Objects are partially monitored and checked on concerning specific damage or risks    |
| 2      | Objects are fully (100%) monitored and checked on concerning specific damage or risks |
| 1      | Damage is obvious, yet, it will not produce any harm                                  |



# FMEA



| FMEA Process                     |                             |                                |          |                               |            |   |           |                                |  |   | Action results  |          |            |           |     |
|----------------------------------|-----------------------------|--------------------------------|----------|-------------------------------|------------|---|-----------|--------------------------------|--|---|---|----------|------------|-----------|-----|
| Item / Process Step              | Potential Failure Mode      | Potential Effect(s) of Failure | Severity | Potential Cause(s) of Failure | Occurrence | Current Controls                                  | Detection | RPN                            | Recommended Action   | Responsibility and Target Completion Date | Action taken  | Severity | Occurrence | Detection | RPN |
| Order printed out in the kitchen | It does not print the order | Pizza will not be made         | 9        | No paper in the printer       | 7          | The cook checks the printer every once in a while | 5         | 315                            | Red alarm light and accustic signal in cases of paper jams or few paper left | Chef de cuisine                           | Red alarm light and accoust ic signal in cases of paper jams r few paper left | 9        | 2          | 5         | 90  |
| Total Risk priority Number       |                             |                                |          |                               |            |   |           | Resulting Risk priority Number |  |   |   |          |            |           |     |

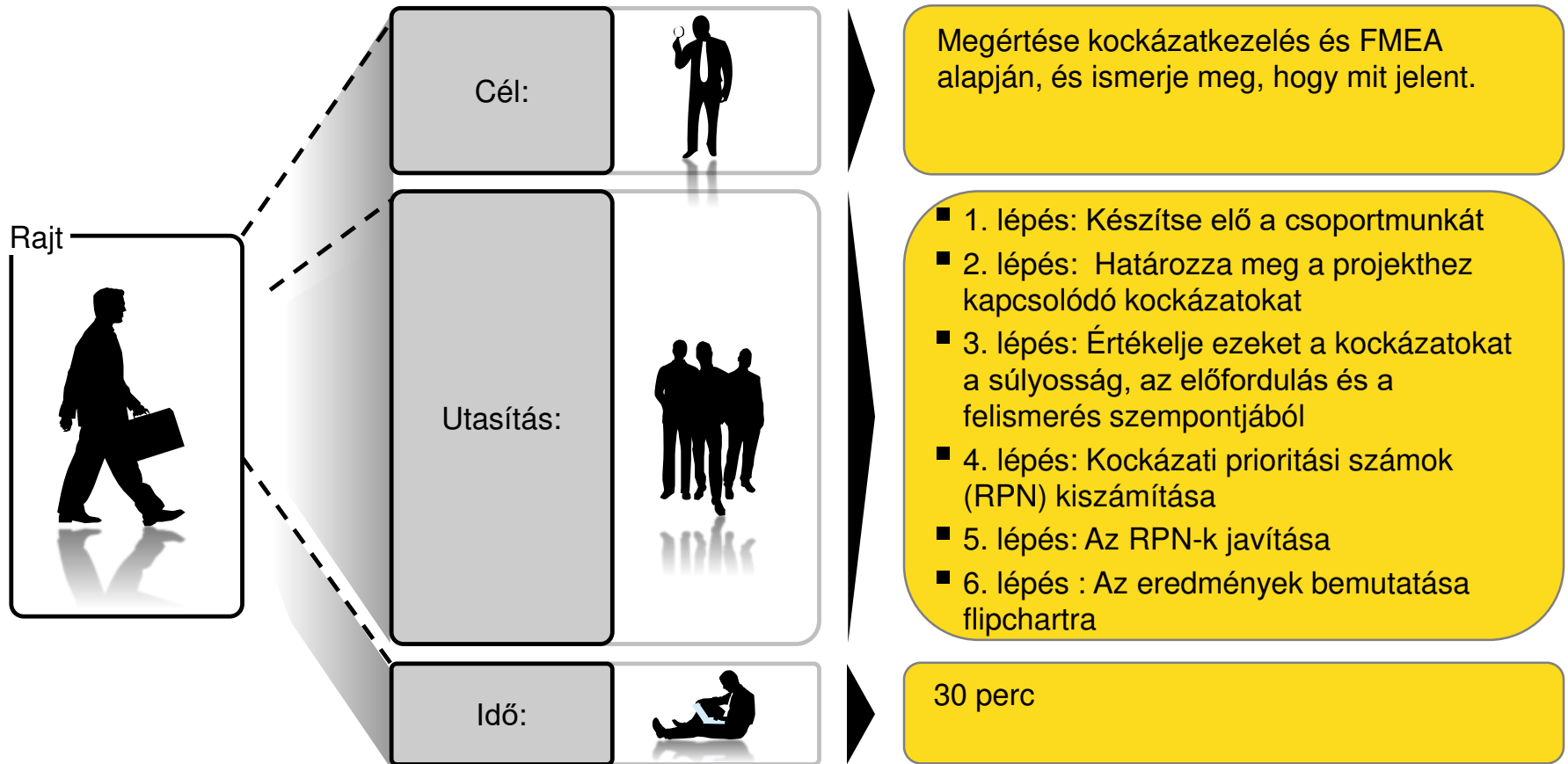


## A kárból tanulni

- A kár okának meghatározása (tűz, baleset, ...)
- A vagyon leírása = az objektumok áttekintése (tervek, építési szolgáltatások, IT, hozzáférés, utak, felhasználók, érdekeltek, ...)
- A kár leírása
- A kár értékelése (költség, idő, helyreállítási képesség, ...)

## Kockázatkezelési igények:

- Világosan meghatározott feladatok
- Teljes felelősség világosan meghatározott kompetencia területekért
- Világos feladatok és egyértelmű utasítások
- Csak a legfontosabb szempontok lefedése
- Kölcsönös információátadás időben és átfogó módon



- Gerald Wagenhofer: UBW Unternehmensberatung  
Wagenhofer GmbH
- Mesterképzés az üzleti adminisztrációban
- Gerald egy hitelesített Lean Six Sigma Master fekete öv, és több mint 1000 fekete övezetet tanított a Lean Six Sigma módszertan, a Change
- A menedzsment és a puha készségek, például a megkönnyítés, a találkozási készségek, a prezentációs készségek. Ő is képzett embereket a stratégiában és a kontrolling / monitoring készségek
- Gerald 1991 óta üzleti tanácsadóként dolgozott. Fő célcsoportjai a köz- és a nonprofit szektor. A projektek elsősorban a folyamatokkal és az adott szervezetek stratégiáival való kapcsolatukkal foglalkoztak.



# Szerzői információk



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- **UBW Unternehmensberatung Wagenhofer GmbH**, ([www.ubw-consulting.eu](http://www.ubw-consulting.eu)), Austria: Gerald Wagenhofer



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Ezt a projektet az Európai Bizottság támogatásával támogatják. Ez a kiadvány csak a szerző véleményét tükrözi, és a Bizottság nem tehető felelőssé az abban foglalt információk felhasználásáért.



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**U3.E5 page 23**



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# Element U3.E5: Risk Management

## Strategia di risk management





# Agenda

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U3.E5 Risk Management

GW

1,5h

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**U3.E5 page 2**

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## U3.E5 Risk Management

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GW

1 Risultati di apprendimento attesi

GW

2 Definizione di Risk management

GW

3 Identificazione del rischio

GW

4 Valutazione del rischio

GW

5 Controllo del rischio

GW

6 Precondizioni organizzative

GW

7 Lavoro di gruppo "Applicare la FMEA"

GW

# MODI-FY Risultati di apprendimento attesi



| Competenza                                  | Livello | Risultati di apprendimento                              |   |  |
|---|---------|---|---|--|
|   |         | Conoscenze  | Competenze/ applicazione  | Attitudine   |
| Sviluppare una strategia di risk management | 5       | Definire il risk management                             | Selezionare strategie appropriate di risk management                                | Sentirsi preparato all'elaborazione di un piano di risk management |
|   |         | Definire e descrivere le strategie di risk management   | Applicare gli strumenti del risk management   | Comprendere il valore di un piano di risk management               |
|   |         | Definire e descrivere i vantaggi del risk management    | Applicare analisi e strumenti appropriati per preparare un piano di risk management |  |
|   |         | Definire e descrivere gli strumenti del risk management |   |  |
|   |         | Descrivere lo sviluppo di un piano di risk management   |   |  |

# MODI-FY Risultati di apprendimento attesi



| Competenza  | Livello | Risultati di apprendimento  |  |   |
|---|---------|---|--|---|
|   |         | Conoscenze  | Competenze/ applicazione   | Attitudine  |
| Implementazione di una strategia di risk management |         | Definire e descrivere le strategie d'implementazione di risk management         | Sviluppare un appropriato processo di attuazione di risk management                    | Assumersi la responsabilità dell'implementazione e dell'attuazione di un piano di risk management |
|   |         | Definire e descrivere gli strumenti per l'implementazione del risk management   | Applicare adeguatamente gli strumenti d'implementazione                                |   |
| Comunicazione strategia di risk management          |         | Definire la divulgazione e la comunicazione di una strategia e un piano di risk | Sviluppare una divulgazione e comunicazione del piano di risk management appropriata   | Sentirsi fieri di comunicare un piano di risk management  |
|   |         | Definire e descrivere gli strumenti di divulgazione e comunicazione             | Elaborare misure di comunicazione e divulgazione di risk management appropriate (KPIs) | Sentirsi responsabili del successo del risk management  |
|   |         | Definire e descrivere gli strumenti di monitoraggio                             |  |   |

## Risk management (ISO 31000: 2009):

- “è un processo di gestione, che ruota attorno all’identificazione, all’analisi e alla valutazione del rischio di un’organizzazione. Per questo, gli obiettivi prioritari, le strategie e le politiche per la gestione del rischio di un’organizzazione devono essere chiaramente stabiliti.”  
(<https://de.wikipedia.org/wiki/Risikomanagement> )
- Ciò include:
  - Determinazione/definizione dei criteri con cui verranno esaminati e valutati i rischi
  - Metodi di valutazione del rischio
  - Definizione delle responsabilità relative alle future decisioni in termini di gestione/ trattamento del rischio
  - Fornitura di risorse per la prevenzione dei rischi
  - Comunicazione interna ed esterna dei rischi identificati (reporting).
  - Qualificazione personale per la gestione del rischio.

# Elementi del risk management

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- Definizione del contesto
- Identificazione del rischio
- Analisi/valutazione del rischio
- Misure per la gestione del rischio
- Monitoraggio del rischio

## Rischi e pericoli:

- Il pericolo esiste quando una situazione può avere conseguenze negative
- Il pericolo diviene un rischio a causa di un'esposizione
- Il rischio si esprime nella probabilità che il pericolo presente incontri l'oggetto o la persona interessata
- Rischio: il prodotto tra la probabilità che si verifichi l'evento dannoso e il danno massimo ipotizzabile che lo stesso evento può causare
- L'insorgere del rischio è calcolabile, ad es. Possiamo aspettarcelo

## Azienda/Organizzazione

### Rischi strategici

- Rischi connessi al mercato
- Rischi correlati alla concorrenza
- Rischi di performance
- Rischi di gestione e organizzativi
- Rischi sociali ed ecologici
- Rischi finanziari

### Rischi operativi

- Rischi connessi ad aspetti finanziari
- Rischi connessi alle risorse umane
- Rischi del progetto o dell'erogazione del servizio
- Altri rischi



## Rischi nella gestione del patrimonio

### Utilizzo

- Rischi Stakeholder
- Rischi connessi al mercato
- Rischi correlati alla concorrenza
- Rischi di performance/rischi connessi all'erogazione del servizio
- Rischi di gestione e organizzativi
- Rischi sociali ed ecologici
- Rischi finanziari

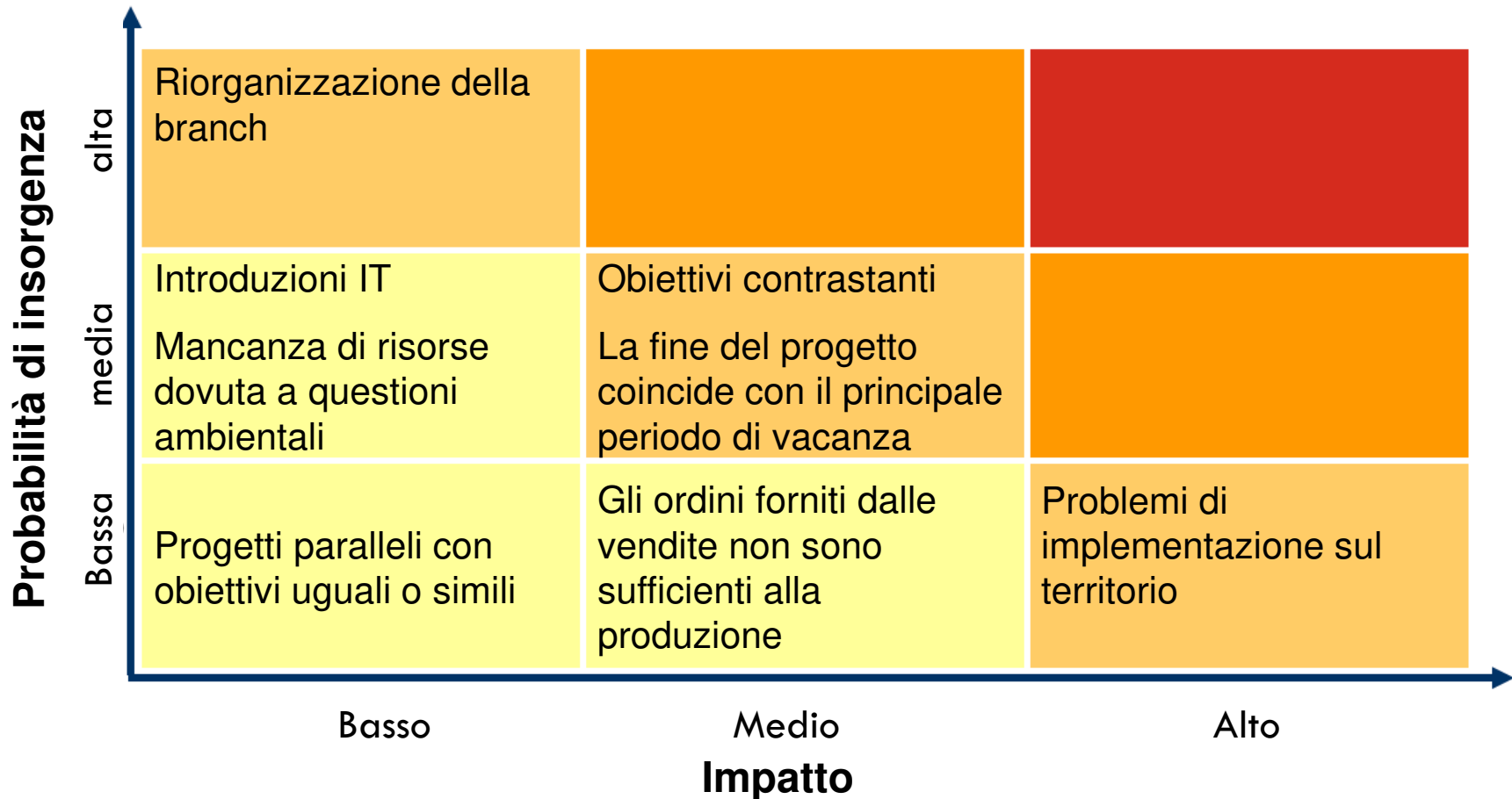
### Oggetto

- Rischi connessi all'edificio
  - Eventi elementari
  - rilevanza
  - condizione
  - età
  - location
- Rischi connessi al mercato
- Rischi correlati alla concorrenza
- Rischi di performance
- Rischi ecologici

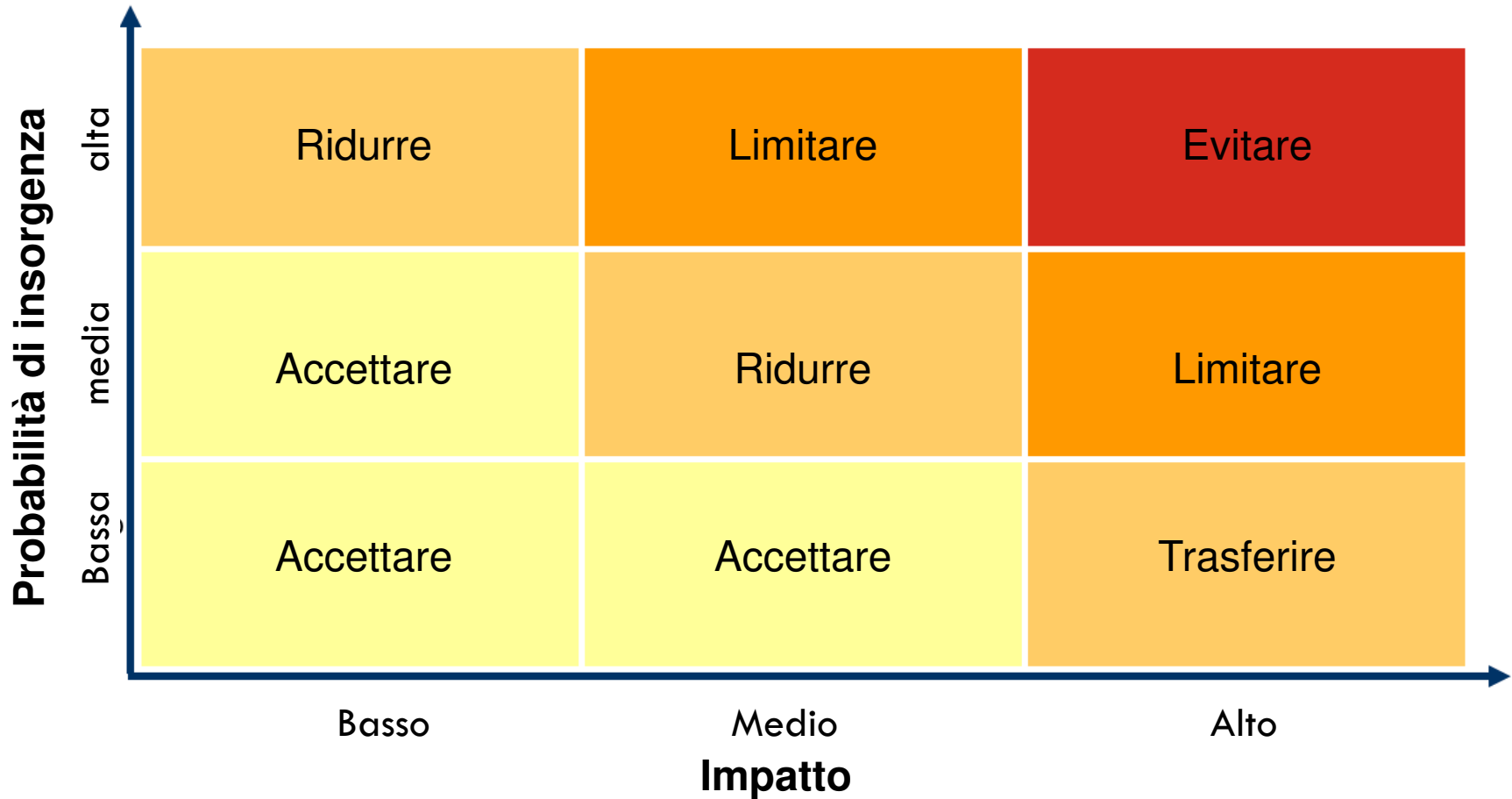
### Progetto/ fornitura del servizio

- Rischi Stakeholder
- Rischi connessi ad aspetti finanziari e di budget
- Rischi di danni all'edificio
- Rischi riguardanti
  - Allocazione delle risorse
  - Errori organizzativi
  - Errata gestione dei progetti
  - Capacità o volontà di controllo

# Portfolio / inventario rischi

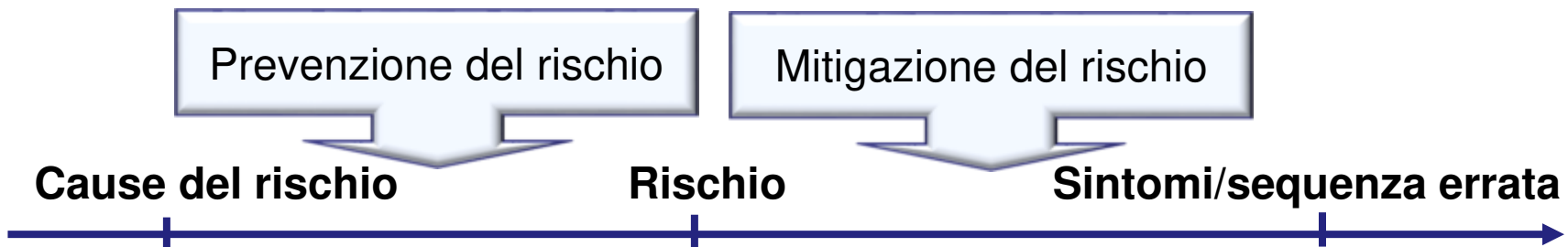


# Analisi/valutazione del rischio (1)



## Riconoscere e mitigare i rischi: FMEA

- L'analisi dei modi e degli effetti dei guasti, (FMEA) è usata per identificare e determinare le aree in cui il rischio deve essere minimizzato
- Obiettivi: preservare oggetti, edifici e progetti.
- Prevenire o ridurre eventuali conseguenze negative in caso di rischi
- Implementare e redigere misure per ridurre il rischio



## Approccio:

- Indicare l'oggetto/progetto
- Prevedere la gravità (del suo effetto – Severity ) , la probabilità di insorgenza (Occurance) e la rilevabilità (Detection) per ogni rischio
- Calcolare il Risk priority number (RPN) moltiplicando i valori di Severity, Occurrence e Detection (RPN sarà compreso tra 1 e 1,000)
- Stabilire una priorità dei rischi in base al loro RPN (ogni rischio con RPN sopra il 120 deve essere migliorato)
- Sviluppare misure per ridurre o eliminare questi rischi
- Dopo l'attuazione di tali misure calcolare nuovamente il RPN

# Probabilità (Occurance)

A vertical arrow pointing downwards, with a color gradient from red at the top to green at the bottom, indicating a scale or progression.

| Punteggio | Intervallo temporale       | Probabilità     |
|-----------|----------------------------|-----------------|
| 10        | Più di una volta al giorno | >30%            |
| 9         | Ogni 3-4 giorni            | 30%             |
| 8         | Una volta a settimana      | 5%              |
| 7         | Una volta al mese          | 1%              |
| 6         | Ogni 3 mesi                | 0,03%           |
| 5         | Ogni 6 mesi                | 1 su 10.000     |
| 4         | Una volta all'anno         | 6 su 10.000     |
| 3         | Ogni 1-3 anni              | 6 su 1 milione  |
| 2         | Ogni 3-6 anni              | 3 su 10 milioni |
| 1         | Ogni 6-100 anni            | 2 su 1 miliardo |

# Gravità (Severity)



| <b>Punteggio</b> | <b>Criteri – il guasto potrebbe:</b>  |
|------------------|---|
| 10               | Danneggiare utenti o passanti   |
| 9                | Essere illegale/causare problemi di controllo   |
| 8                | Rendere l'oggetto inagibile per un lungo periodo di tempo                               |
| 7                | Causare ulteriori ritardi/inagibilità provocando un'estrema insoddisfazione nel cliente |
| 6                | Comportare un malfunzionamento parziale   |
| 5                | Causare un calo delle prestazioni provocando dei probabili reclami                      |
| 4                | Causare un piccolo calo delle prestazioni   |
| 3                | Causare un piccolo disagio, ma che può essere superato senza una perdita di prestazioni |
| 2                | Passare inosservato e avere solo un piccolo effetto sulle prestazioni                   |
| 1                | Passare inosservato e non avere effetto sulle prestazioni                               |



# Rilevabilità (Detection)



| <b>Punteggio</b> | <b>Definizione</b>   |
|------------------|--|
| 10               | Il danno non è rilevabile  |
| 9                | Gli oggetti vengono controllati occasionalmente  |
| 8                | Gli oggetti sono ispezionati in relazione a rischi specifici   |
| 7                | Gli oggetti vengono controllati sistematicamente   |
| 6                | Gli oggetti vengono controllati manualmente  |
| 5                | Gli oggetti vengono controllati manualmente in relazione a specifici danni o rischi                    |
| 4                | Gli oggetti vengono monitorati e controllati manualmente   |
| 3                | Gli oggetti vengono parzialmente monitorati e controllati in relazione a danni o rischi specifici      |
| 2                | Gli oggetti sono completamente (100%) monitorati e controllati in relazione a danni o rischi specifici |
| 1                | Il danno è evidente, tuttavia, non produrrà alcun pericolo   |





| FMEA Process                      |                             |                                |          |                               |            |  |           |     |   |   | Action results  |          |            |           |     |
|-----------------------------------|-----------------------------|--------------------------------|----------|-------------------------------|------------|--|-----------|-----|---|---|---|----------|------------|-----------|-----|
| Item / Process Step               | Potential Failure Mode      | Potential Effect(s) of Failure | Severity | Potential Cause(s) of Failure | Occurrence | Current Controls                           | Detection | RPN | Recommended Action  | Responsibility and Target Completion Date | Action taken  | Severity | Occurrence | Detection | RPN |
| Ordine stampato in cucina         | L'ordine non viene stampato | La pizza non sar  fatta        | 9        | Non c'  carta nella stampante | 7          | Il cuoco controlla la stampante ogni tanto | 5         | 315 | Luce rossa di allarme e segnale acustico in caso di inceppamenti o poca carta | Chef                                      | Luce rossa di allarme e segnale acustico in caso di inceppamenti o poca carta | 9        | 2          | 5         | 90  |
|                                   |                             |                                |          |                               |            |  |           |     |   |   |   |          |            |           |     |
|                                   |                             |                                |          |                               |            |  |           |     |   |   |   |          |            |           |     |
|                                   |                             |                                |          |                               |            |  |           |     |   |   |   |          |            |           |     |
|                                   |                             |                                |          |                               |            |  |           |     |   |   |   |          |            |           |     |
|                                   |                             |                                |          |                               |            |  |           |     |   |   |   |          |            |           |     |
|                                   |                             |                                |          |                               |            |  |           |     |   |   |   |          |            |           |     |
|                                   |                             |                                |          |                               |            |  |           |     |   |   |   |          |            |           |     |
|                                   |                             |                                |          |                               |            |  |           |     |   |   |   |          |            |           |     |
|                                   |                             |                                |          |                               |            |  |           |     |   |   |   |          |            |           |     |
|                                   |                             |                                |          |                               |            |  |           |     |   |   |   |          |            |           |     |
|                                   |                             |                                |          |                               |            |  |           |     |   |   |   |          |            |           |     |
|                                   |                             |                                |          |                               |            |  |           |     |   |   |   |          |            |           |     |
|                                   |                             |                                |          |                               |            |  |           |     |   |   |   |          |            |           |     |
| <b>Total Risk priority Number</b> |                             |                                |          |                               |            |  |           |     | <b>Resulting Risk priority Number</b>   |   |   |          |            |           |     |

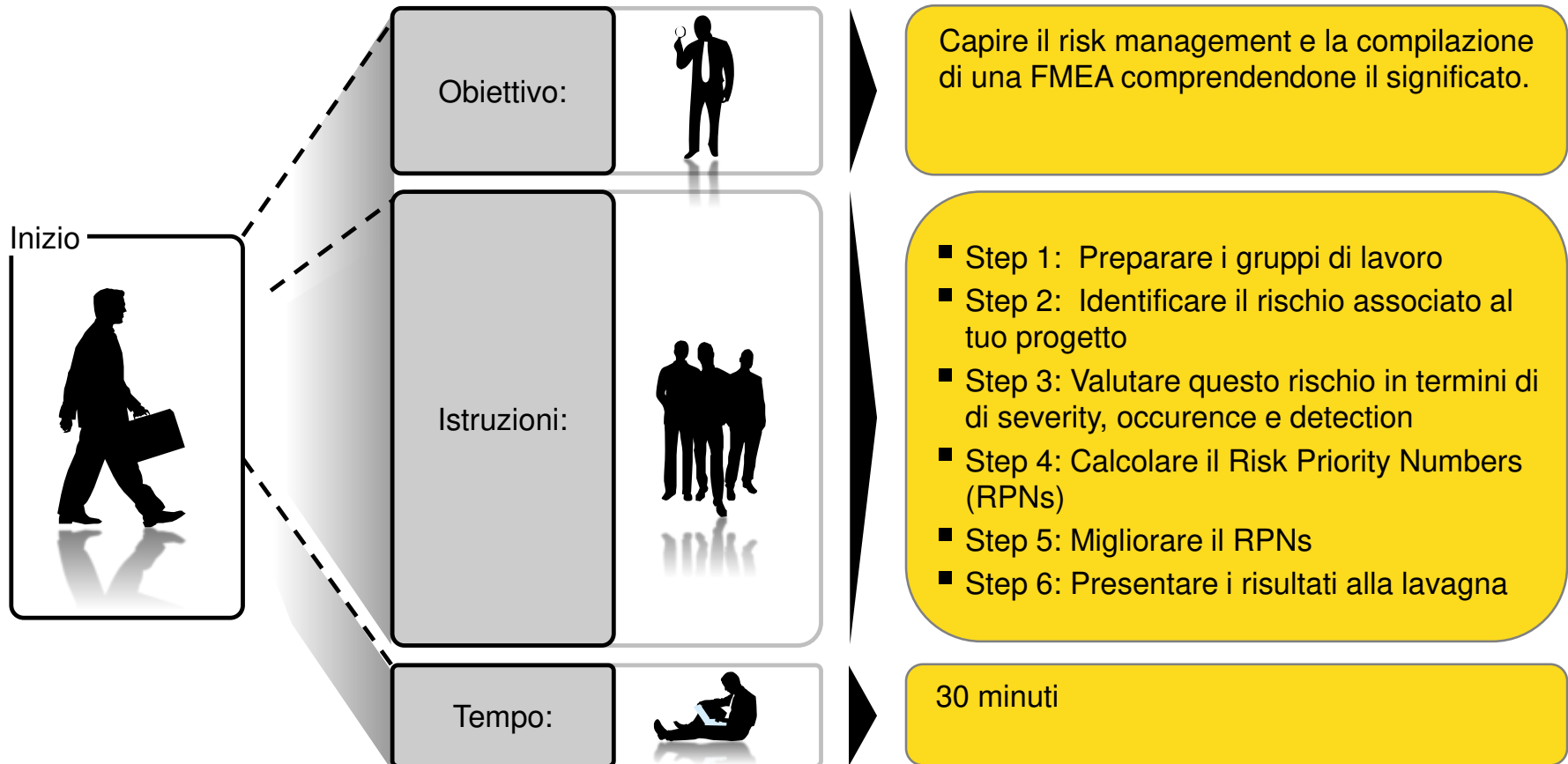


## Imparare dai danni

- Definire le ragioni dei (possibili) danni (incendi, incidenti, ...)
- Descrivere i beni da proteggere = dai un'occhiata ai tuoi oggetti (piani, tecnologia dell'edificio, IT, accesso, percorsi, utilizzo, utenti, stakeholder ...)
- Descrivere i danni
- Valutare i danni (costi, tempi, potenzialità di ripristino, ..)

## Esigenze del Risk management:

- Chiara definizione dei compiti
- Piena responsabilità per aree di competenza ben definite
- Compiti chiari e istruzioni chiare
- Far fronte solo agli aspetti più essenziali
- Trasferimento di informazione reciproca in tempo e in modo comprensivo



- Gerald Wagenhofer: UBW Unternehmensberatung Wagenhofer GmbH
- Master degree in Business Administration
- Gerald is a certified Lean Six Sigma Master Black Belt, and trained more than 500 Green and Black Belts resp. project sponsors in Lean Six Sigma methodology, Change Management and Soft Skills, like Facilitation, Meeting skills, Presentation skills. He had also trained people in Strategy and Controlling/Monitoring skills
- Gerald is working as a business consultant since 1991. The main target groups are the Public and Non-Profit sector. The projects were mainly dealing with processes and their connection to the strategies of the respective organisations



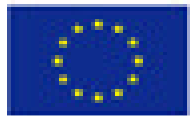
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# Elemento U3.E5: Gestão de Risco

## Estratégia de Gestão de Risco





# Agenda

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U3.E5 Gestão de Risco

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**U3.E5 page 2**

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## U3.E5 Gestão de Risco

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GW

1 Resultados

GW

2 Definição de Gestão de Risco

GW

3 Identificação de Risco

GW

4 Avaliação de Risco

GW

5 Monitorização de Risco

GW

6 Pré-condição Organizacional

GW

7 Trabalho de Grupo "Aplicar FMEA"

GW

# Resultados MODI-FY



| Competencia                                   | Nível | Resultados  |  |   |
|---|-------|---|--|---|
|   |       | Conhecimento  | Aptidões/ Aplicação  | estratégia  |
| Desenvolver uma estratégia de gestão de risco | 5     | Descrever a gestão de Risco                             | Seleccionar o plano de risco certo                               | Sentir confidante para aplicar um plano de gestão |
|   |       | Nomear e descrever uma estratégia de risco              | Aplicar as ferramentas de gestão                                 | Apreciar o valor acrescido de uma plano de gestão |
|   |       | Nomear e descrever os benefícios de uma gestão do risco | Aplicar as ferramentas correctas para preparar um plano de risco |   |
|   |       | Nomear e descrever as ferramentas de gestão             |  |   |
|   |       | Nomear e descrever os modos de aplicação da gestão      |  |   |

# Resultados MODI-FY



| Competencia  | Nível | Resultados   |   |  |
|--|-------|--|---|--|
|  |       | Conhecimento   | aptidões/ Aplicação   | Abordagem  |
| Implementação de uma estratégia de gestão de risco |       | Nomear e descrever os modos de estratégias de risco              | Desenvolver uma implementação adequada                      | Aceitar a responsabilidade e gerir um plano de risco   |
|  |       | Nomear e descrever as ferramentas de execução do plano de risco  | Aplicar as ferramentas de gestão apropriadas                |  |
| communicating risk management strategy             |       | Descrever o plano de disseminação                                | Desenvolver um plano apropriado de gestão de risco          | Sentir-se orgulho de falar e divulgar o plano de risco |
|  |       | Nomear e descrever as ferramentas disponíveis para implementação | Desenvolver um plano de risco aplicando as suas estratégias | Sentir-se responsável pelo results«ado fin             |
|  |       | Nomeia e identifique as estratégias e planos                     |   |  |

## Gestão de Risco (ISO 31000: 2009):

- “É uma função de gestão, que se desenvolve à volta de identificar, analisar e avaliar os riscos de uma organização. Para tal, define metas ambiciosas, estratégias e políticas para uma organização de gestão de risco.” (<https://de.wikipedia.org/wiki/Risikomanagement> )
- Isto inclui:
  - Definição de critérios pelos quais se orientarão os riscos e a avaliação,
  - A determinação de métodos,
  - Responsabilidades por decisões dirigidas para a gestão de risco,
  - Providenciar os recursos para a prevenção do risco,
  - Relatórios internos e externos sobre a prevenção de risco.
  - Qualificar pessoal para a gestão de risco

# Elementos da gestão de risco

---



- Definição do sistema
- Identificação do risco
- Avaliação do risco
- Medidas para lidar com o risco
- Monitorização

## Riscos e ocorrências:

- As ocorrências são nefastas quando causam problemas.
- As ocorrências serão negativas face à exposição
- O risco expressa a probabilidade de uma ocorrência se verificar
- Risco: é probabilidade da ocorrência multiplicada pela severidade do mesmo
- A ocorrência de um risco é possível de quantificar, podemos prever.

## Companhia/Organização

### Risco Estratégico

- Risco relacionado com o mercado
- Risco relacionado com competição
- Risco de performance
- Gestão de risco
- Risco social e ecológico
- Risco financeiro

### Risco Operacional

- Risco financeiro
- HR risco
- Risco de projecto e de entrega
- Outros riscos



## Riscos na Gestão do Património

### Utilização

- Risco da entidade
- Riscos de mercado
- Risco de competição
- Riscos de performance ou da entrega
- Riscos organizacionais ou de gestão
- Riscos ecológico ou social
- Risco financeiro

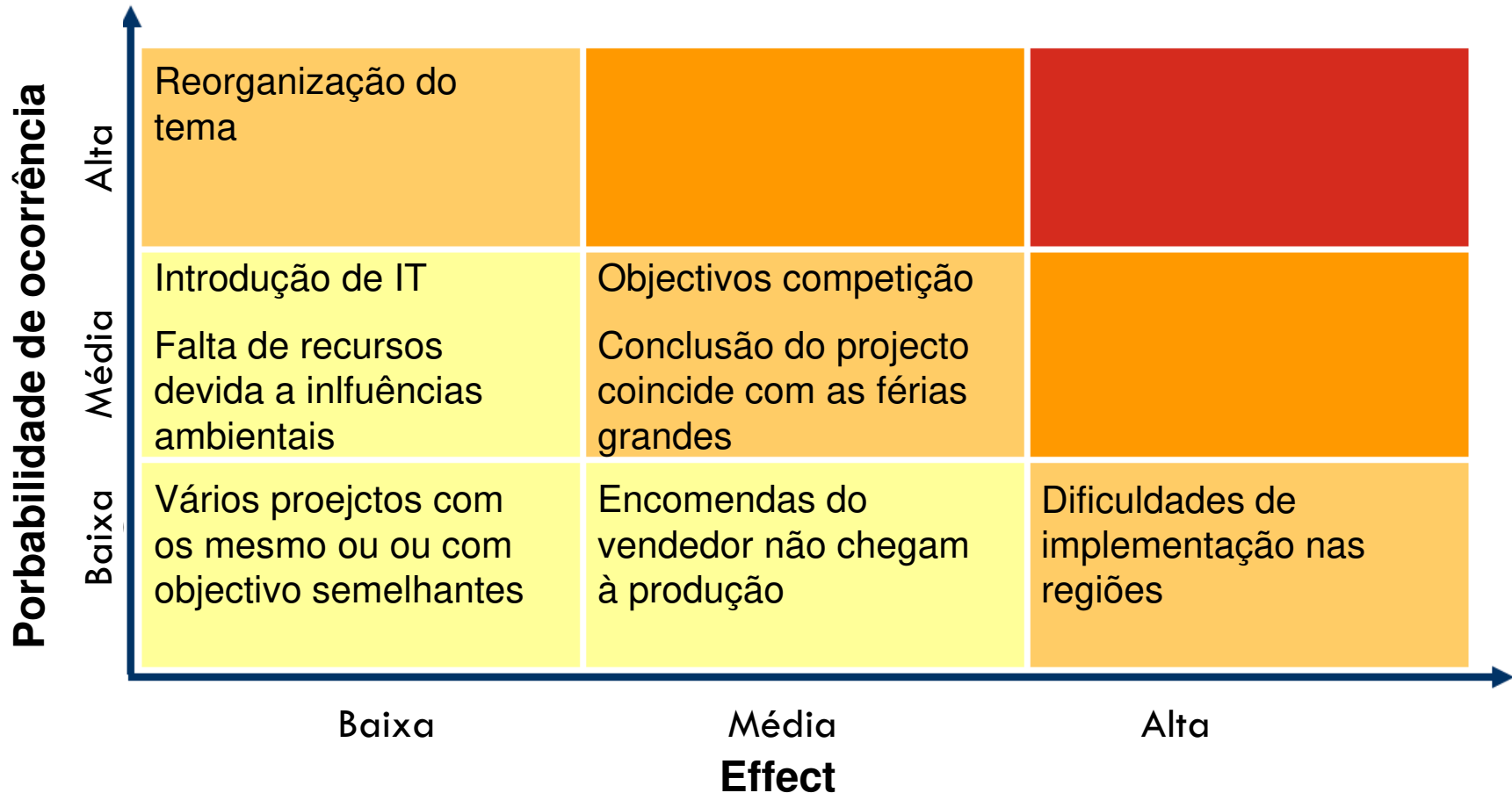
### Objecto

- Risco do edifício
  - Eventos elementares
  - significado
  - condição
  - idade
  - localização
- Risco de mercado
- Risco de competições
- Risco de performance
- Risco ecológico

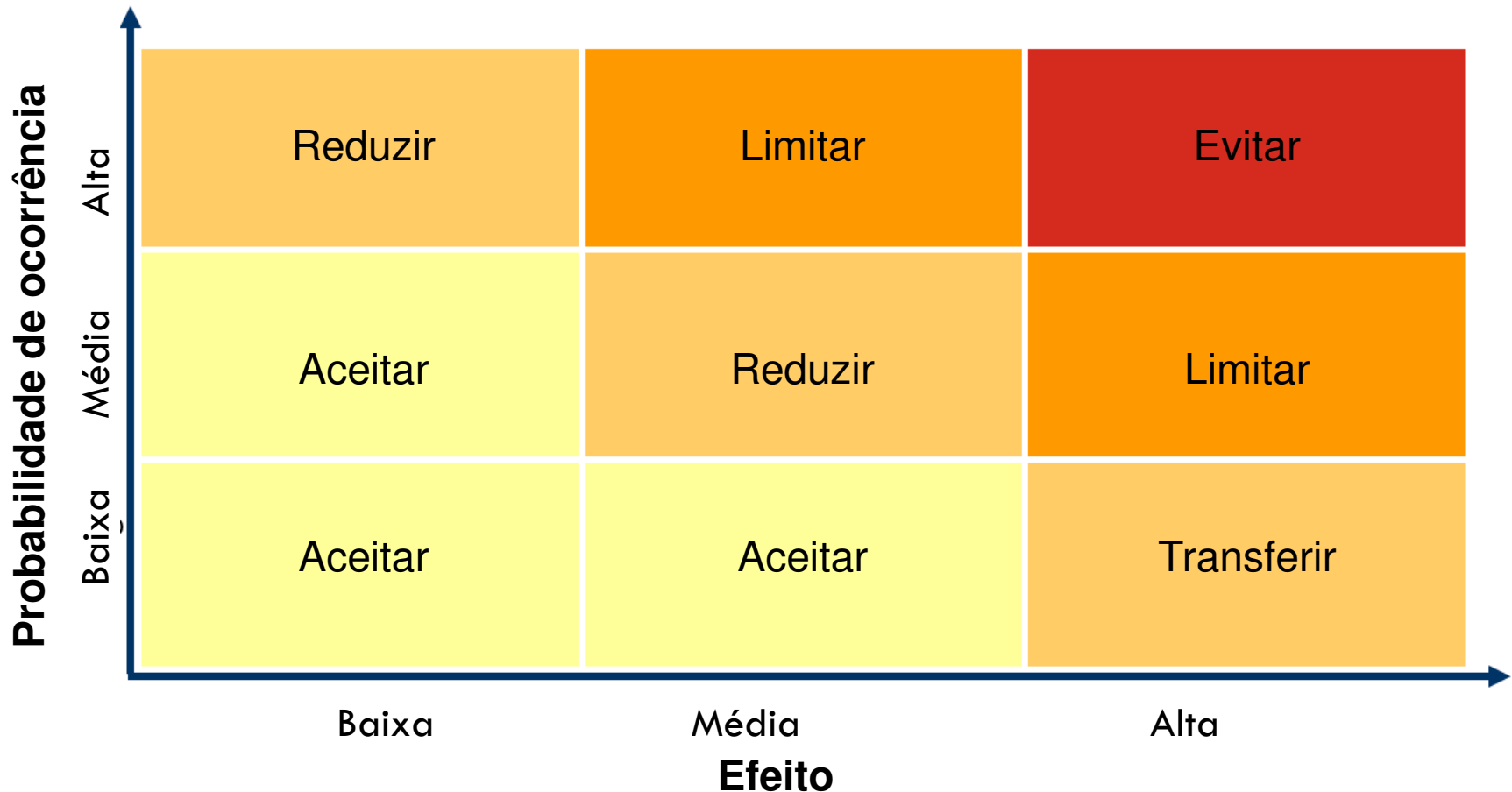
### Projecto / entrega

- Risco da entidade
- Risco financeiro
- Risco de danificação
- Riscos que consideram:
  - Alocação de recursos
  - Erros organizacionais
  - Desgoverno na gestão do processo
  - Capacidade e desejo de controlo

# Portfolio de risco / inventário

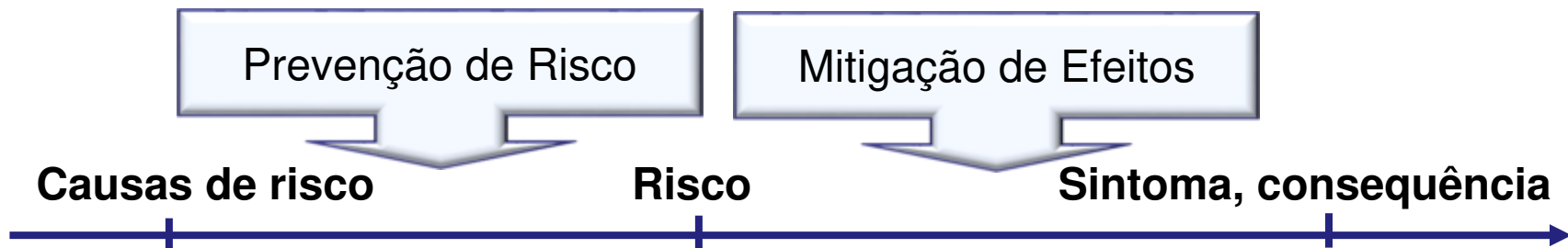


# Avaliação de risco (1)



## Reconhecer e mitigar o risco: FMEA


- Failure Mode and Effects Analysis (FMEA) (Modo de Falhas e Análise de Efeitos) é usado para identificar áreas e determinar prioridades onde os riscos devem ser minimizados
- Prevenir ou reduzir as consequências em caso do risco ocorrer
- Implementação e documentação de medidas para redução de risco



## Abordagem:

- Listando o edifício ou problema
- Rever severidade (efeito), probabilidade de ocorrência e as medidas para lidar com o problema
- Calcular o Número de Probabilidade de Risco (RPN) multiplicando os números da severidade, ocorrência e detecção (RPN será entre 1 e 1,000)
- Priorizar os risco pelo RPN (cada risco e RPN e todos os maiores de 120 devem ser melhorados)
- Desenvolver medidas para reduzir ou eleminar o risco
- No final da aplicação das medidas, avaliar de novo

# Probabilidade de ocorrência

A vertical arrow pointing downwards, with a color gradient from red at the top to green at the bottom, indicating a scale or progression.

| Nível | Período temporal        | Probabilidade    |
|-------|-------------------------|------------------|
| 10    | Mais do uma vez por dia | >30%             |
| 9     | Cada 3-4 dias           | 30%              |
| 8     | Uma vez por semana      | 5%               |
| 7     | Uma vez por mês         | 1%               |
| 6     | Cada 3 meses            | 0,03%            |
| 5     | Cada 6 meses            | 1 pro 10.000     |
| 4     | Uma vez por ano         | 6 pro 10.000     |
| 3     | Cada 1-3 anos           | 6 pro 1 million  |
| 2     | Cada 3-6 anos           | 3 pro 10 million |
| 1     | Cada 6-100 anos         | 2 per 1 billion  |



| Nível | Critério – nuvem de possibilidade:                              |
|-------|---|
| 10    | Magoa utilizadores ou quem passe por perto                      |
| 9     | Ser ilegal / colocar problemas legais                           |
| 8     | Torna o objecto impossível de usar durante muito tempo          |
| 7     | Incapacidade de uso causando extrema insatisfação ao utilizador |
| 6     | Resulta em mau funcionamento parcial                            |
| 5     | Causa redução de performance, capaz de gerar reclamação         |
| 4     | Causa uma mínima redução de performance                         |
| 3     | Causa uma mínima perturbação e pode ser corrigida sem problema  |
| 2     | Não se nota e causa mínimo efeito na performance                |
| 1     | Não se nota e não afecta performance                            |

# Probabilidade de detectar



| Nível | Definição  |
|-------|--|
| 10    | Estrago não se detecta   |
| 9     | Objectos são verificados ocasionalmente                        |
| 8     | Objectos são verificados em busca de riscos específicos        |
| 7     | Objectos são verificados automaticamente                       |
| 6     | Objectos são verificados manualmente                           |
| 5     | Objectos são veriifcados manualmente para riscos específicos   |
| 4     | Objectos são monitorizados e verificados manualmente           |
| 3     | Objectos são monitorizados e veriifcados com respeito a riscos |
| 2     | Objectos são totalmente (100%) monitorizados e avaliados       |
| 1     | Estrago é evidente, embora não produza qualquer perturbação    |







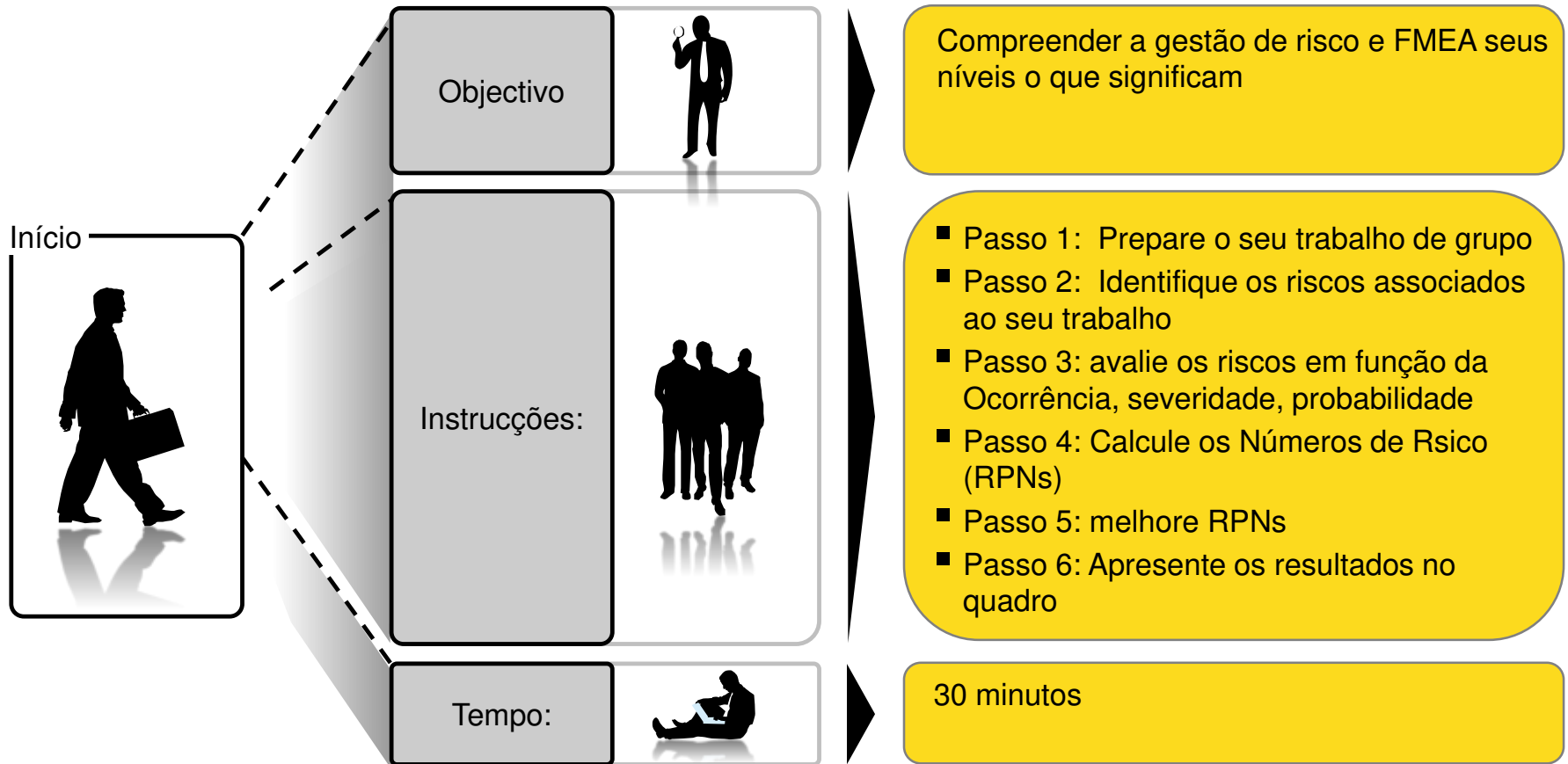
## Aprender dos estragos

- Defina razões para (possível) estrago (fogo, acidente, ...)
- Descrever as proteções contra o fogo= olhe para os objectos (planos, escadas, equipamentos de combate, extintores, ...)
- Descrevas os estragos
- Avalie os estragos(custos, valor, capacidade para restaurar, .. )

## Necessidade de Gestão de risco:

- Definir claramente as tarefas
- Total competência para definir as responsabilidades
- Tarefas e deveres claros
- Cobrir apenas os aspectos essenciais
- Troca de informação relevante em tempo útil e de modo claro

# Trabalho de Grupo



- Gerald Wagenhofer: UBW Unternehmensberatung Wagenhofer GmbH
- Master degree in Business Administration
- Gerald is a certified Lean Six Sigma Master Black Belt, and trained more than 500 Green and Black Belts resp. project sponsors in Lean Six Sigma methodology
- Competências de Gestão e Soft, como facilitação, habilidades de reunião, habilidades de apresentação. Ele também treinou pessoas em habilidades de Estratégia e Controle / Monitoramento
- Gerald trabalha como consultor de negócios desde 1991. Os principais grupos-alvo são o setor público e sem fins lucrativos. Os projetos lidavam principalmente com processos e sua conexão com as estratégias das respectivas organizações



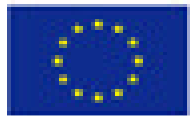
# Referência aos Autores



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**U3.E5 page 23**



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# Časť U3.E5: Manažment rizika

## Stratégia manažmentu rizika





# Program

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U3.E5 Manažment rizika

GW

1,5h

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**U3.E5 page 2**

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|       |  |    |
|-------|--|----|
| U3.E5 | Manažment rizika                       | GW |
| 1     | Výsledky učenia                        | GW |
| 2     | Definícia manažmentu rizika            | GW |
| 3     | Identifikácia rizika                   | GW |
| 4     | Posúdenie rizika / - ohodnotenie       | GW |
| 5     | Dohľad nad rizikom                     | GW |
| 6     | Organizačné predpoklady                | GW |
| 7     | Skupinová práca "použitie metódy FMEA" | GW |

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# MODI-FY Výsledky vzdelávania



| Kompetencie                              | Stupeň | Výsledky vzdelávania                            |  |   |
|--|--------|---|--|---|
|  |        | Znalosti  | Zručnosti/aplikácia  | Prístup   |
| Vypracovanie stratégie manažmentu rizika | 5      | Popis manažmentu rizika                         | Výber vhodnej stratégie manažmentu rizika  | Pocit'ovanie istoty v pláne rozvoja riadenia rizika |
|  |        | Pomenovanie a popis stratégie manažmentu rizika | Použité nástroje manažmentu rizika   | Ocenenie hodnoty plánu manažmentu rizika            |
|  |        | Pomenovanie a popis výhod manažmentu rizika     | Použité vhodné analytické a záznamové nástroje na prípravu plánu manažmentu rizika |   |
|  |        | Pomenovanie a popis nástrojov manažmentu rizika |  |   |
|  |        | Popís vývoj plánu manažmentu rizika             |  |   |
|  |        |   |  |   |

# MODI-FY Výsledky vzdelávania



| Kompetencie                               | Stupeň | Výsledky vzdelávania   |   |   |
|---|--------|--|---|---|
|   |        | Znalosti   | Zručnosti/aplikácia   | Prístup   |
| Implementácia stratégie manažmentu rizika |        | Pomenovanie a popis implementácie stratégie manažmentu rizika      | Rozvíjajte vhodné implementačné procesy manažmentu rizika         | Prijmite zodpovednosť za implementáciu a existenciu plánu manažmentu rizika |
|   |        | Pomenovanie a popis nástrojov implementácie manažmentu rizika      | Využívajte vhodné nástroje implementácie                          |   |
|   |        |  |   |   |
| Komunikácia stratégie manažmentu rizík    |        | Popís šírenia a komunikácie stratégiu plánovanie manažmentu rizika | Rozvíjajte vhodné šírenie manažmentu rizika a komunikačného plánu | Pociťujte hrdosť na komunikáciu plánu manažmentu rizika                     |
|   |        | Pomenovanie a popis prostriedkov a nástrojov šírenia a komunikácie | Rozvíjajte vhodné šírenie manažmentu rizika a komunikačné meradlá | Pociťujte zodpovednosť za úspech manažmentu rizika                          |
|   |        | Pomenovanie a popis nástrojov merania zisku                        |   |   |

## Manažment rizika (ISO 31000: 2009):

- “je manažérska funkcia, ktorá sa zameriava na identifikáciu, analýzu a posudzovanie rizika organizácie. Za týmto účelom sa stanovujú ciele, stratégie a politiky pre manažment rizika organizácie .“  
(<https://de.wikipedia.org/wiki/Risikomanagement> )
- Toto zahŕňa
  - Stanovenie / určenie kritérií, ktorými sa odhadujú a vyhodnocujú riziká,
  - Metódy znižovania rizík,
  - Zodpovednosti za rozhodnutia týkajúce sa riadenia / spracovanie rizík,
  - Poskytovanie zdrojov na prevenciu rizík,
  - Interná a externá komunikácia identifikovaných rizík (správy) resp.
  - Kvalifikovaný personál pre manažment rizík.

- Definícia systému
- Identifikácia rizika
- Posúdenie/ ohodnotenie rizika
- Opatrenia na zvládnutie rizík
- Monitorovanie rizika

## Riziká a nebezpečenstvá:

- Nebezpečenstvo existuje, ak môže mať situácia nepriaznivé následky.
- Nebezpečenstvo bude znamenať riziko z vysvetlenia
- Riziko vyjadruje pravdepodobnosť, že súčasné nebezpečenstvo sa stretne s dotknutou osobou alebo predmetom
- Riziko - produkt pravdepodobnosti výskytu nežiadúcej udalosti a závažnosť poškodenia v dôsledku možného výskytu udalosti
- Výskyt rizika je vypočítateľný, napr. môžeme ho očakávať

## Spoločnosť/Organizácia

### Strategické riziká

- Riziká súvisiace s trhom
- Riziká súvisiace s konkurenciou
- Riziká súvisiace s výkonnosťou
- Riadiace a organizačné riziká
- Sociálne a ekologické riziká
- Finančné riziká

### Operačné riziká

- Finančné riziká
- Riziká týkajúce sa ľudských zdrojov
- Riziká pri poskytovaní služieb alebo projektov
- Ďalšie riziká



## Riziká manažmentu kultúrneho dedičstva

### Využitie

- Riziká akcionárov
- Riziká súvisiace s trhom
- Riziká súvisiace s konkurenciou
- Riziká súvisiace s výkonnosťou / riziká súvisiace s dodaním služieb
- Riadiace a organizačné riziká
- Sociálne and ekologické riziká
- Finančné riziká

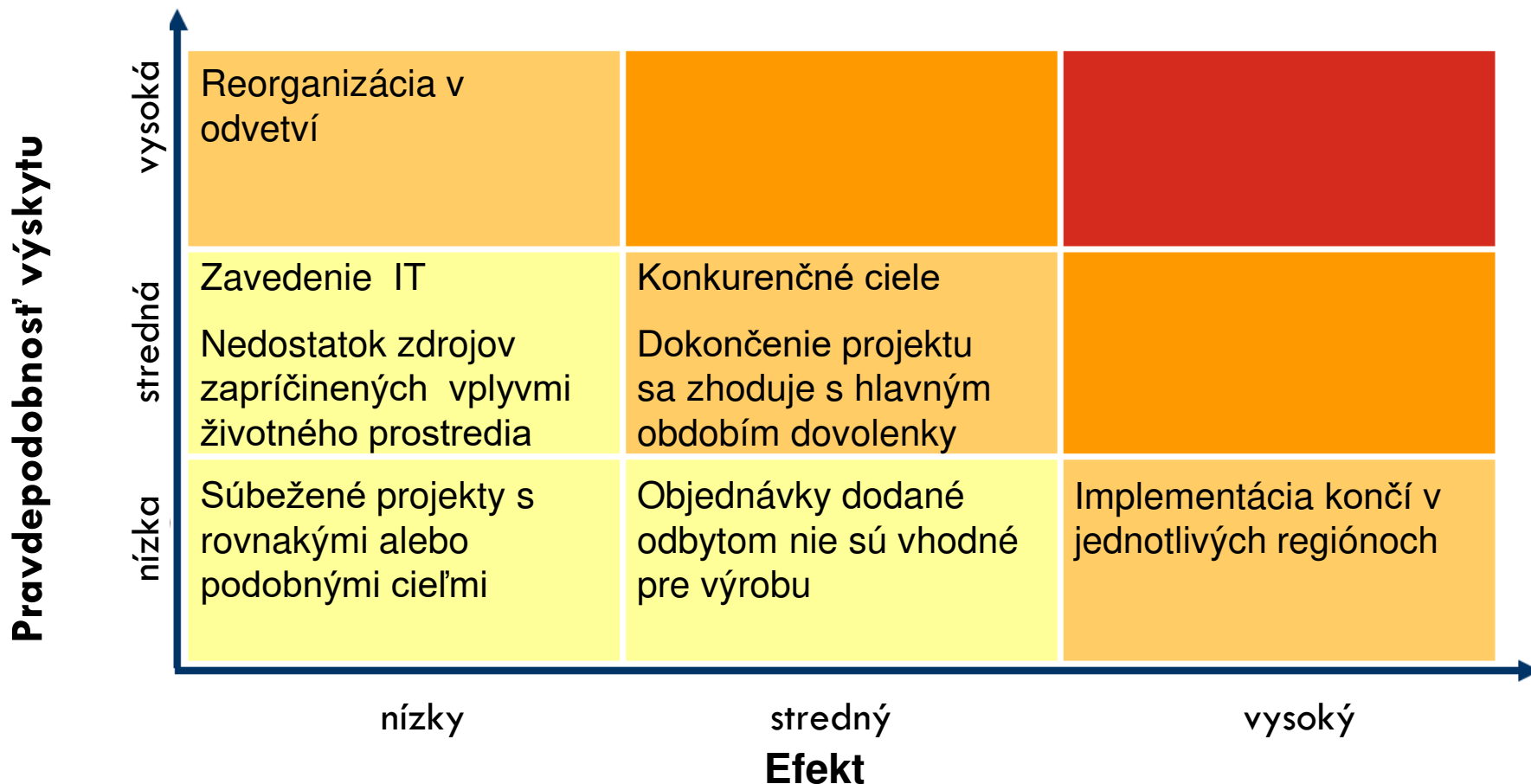
### Objekt

- Stavebné riziká
  - základné udalosti
  - význam
  - stav
  - vek
  - poloha
- Riziká súvisiace s trhom
- Riziká súvisiace s konkurenciou
- Riziká súvisiace s výkonnosťou
- Ekologické riziká

### Dodanie projektu / služby

- Riziká akcionárov
- Rozpčtové / Finančné riziká
- Riziká poškodenia stavieb
- Riziká týkajúce sa
  - pridelenia zdrojov
  - organizačných chýb
  - zlého riadenia manažovaných projektoch
- Schopnosť a / alebo ochota kontrolovať

# Portfolio rizík / zoznam



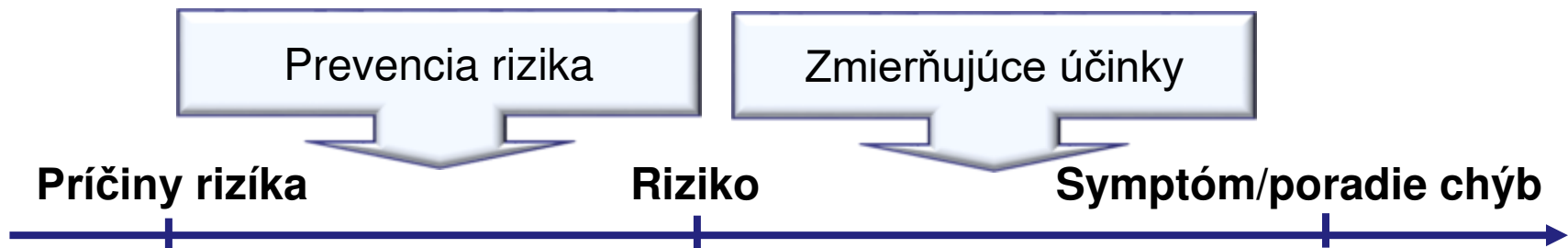
# Posúdenie/ohodnotenie rizík (1)



|                         |         |              |              |              |
|-------------------------|---------|--------------|--------------|--------------|
| Pravdepodobnosť výskytu | vysoká  | Znižovanie   | Obmedzenie   | Vyhýbanie sa |
|                         | stredná | Akceptovanie | Znižovanie   | Obmedzenie   |
|                         | nízka   | Akceptovanie | Akceptovanie | Prenos       |
|                         |         | nízka        | stredná      | vysoká       |
|                         |         | Efekt        |              |              |

## Rozoznávanie a zmierňovanie rizík (FMEA)

- Analýza možných chýb a ich následkov (FMEA) sa využíva na identifikáciu oblastí a určenie priorít v oblastiach, kde je potrebné minimalizovať riziká
- Cieľ: ochrana objektov, budov a projektov
- Zabránenie alebo zníženie akýchkoľvek nepriaznivých následkov, ak sa vyskytnú riziká
- Implementácia a dokumentácia opatrení na zníženie rizika



## Prístup:

- Vytvoriť zoznam objektov/projektov
- Predvídať závažnosť (účinnok), pravdepodobnosť výskytu a vyhľadávanie každého rizika
- Vypočítajte číslo rizika (RPN) vynásobením čísel závažnosti, výskytu a pravdepodobnosť odhalenia chyby (RPN bude medzi 1 a 1 000)
- Uprednostnite riziká podľa ich RPN (každé riziko, ktorého miera RPN je vyššia ako 120 sa musí znížiť)
- Vypracujte opatrenia na zníženie alebo odstránenie týchto rizík
- Po dokončení týchto opatrení znova vypočítajte RPN

# Pravdepodobnosť výskytu

A vertical arrow pointing downwards, with a color gradient from red at the top to green at the bottom, indicating a scale or progression.

| Hodnotenie | Časový úsek         | Pravdepodobnosť  |
|------------|---------------------|------------------|
| 10         | Viac ako raz za deň | >30%             |
| 9          | Každé 3-4 dni       | 30%              |
| 8          | Raz za týždeň       | 5%               |
| 7          | Raz za mesiac       | 1%               |
| 6          | Každé 3 mesiace     | 0,03%            |
| 5          | Každých 6 mesiacov  | 1 pro 10.000     |
| 4          | Raz za rok          | 6 pro 10.000     |
| 3          | Každé 1-3 roky      | 6 pro 1 million  |
| 2          | Každých 3-6 rokov   | 3 pro 10 million |
| 1          | Každých 6-100 rokov | 2 per 1 billion  |



| Hodnotenie | Kritériá - zlyhanie by mohlo:   |
|------------|---|
| 10         | Poškodiť používateľov alebo okoloidúcich                                    |
| 9          | Byť nezákonný/ kvôli problémom s kontrolou                                  |
| 8          | Spôsobiť vec nevhodnú na dlhšie použitie                                    |
| 7          | Prestoje/ neschopnosť pracovať spôsobuje mimoriadnu zákaznícku nespokojnosť |
| 6          | Mať za následok čiastočnú poruchu   |
| 5          | Spôsobiť stratu výkonu, čo pravdepodobne spôsobí sťažnosti                  |
| 4          | Spôsobiť menšiu stratu výkonu   |
| 3          | Zapričiniť malú nepríjemnosť, ale byť prekonaný bez straty výkonu           |
| 2          | Prejsť bez povšimnutia a mať len malý vplyv na výkon                        |
| 1          | Prejsť bez povšimnutia a neovplyvniť výkon                                  |



| Hodnotenie | Definovanie  |
|------------|--|
| 10         | Poškodenie sa nedá zistiť  |
| 9          | Objekty sú kontrolované príležitostne  |
| 8          | Objekty sú kontrolované s ohľadom na špecifické riziká   |
| 7          | Objekty sú kontrolované systematicky   |
| 6          | Objekty sú kontrolované manuálne   |
| 5          | Objekty sú manuálne kontrolované zameriavajú sa na konkrétne škody a riziká                    |
| 4          | Objekty sú monitorované a kontrolované manuálne  |
| 3          | Objekty sú čiastočne monitorované a kontrolované, pokiaľ ide o konkrétne škody alebo riziká    |
| 2          | Objekty sú úplne (100%) monitorované a kontrolované, pokiaľ ide o konkrétne škody alebo riziká |
| 1          | Poškodenie je zrejmé, napriek tomu nespôsobí žiadnu škodu                                      |



| FMEA Process                   |                             |                                |          |                                  |            |  |           |                                |   |   | Action results   |          |            |           |     |
|--------------------------------|-----------------------------|--------------------------------|----------|----------------------------------|------------|--|-----------|--------------------------------|---|---|--|----------|------------|-----------|-----|
| Item / Process Step            | Potential Failure Mode      | Potential Effect(s) of Failure | Severity | Potential Cause(s) of Failure    | Occurrence | Current Controls                       | Detection | RPN                            | Recommended Action  | Responsibility and Target Completion Date | Action taken   | Severity | Occurrence | Detection | RPN |
| Objednávka vytlačená v kuchyni | Objednávka nebude vytlačená | Pizza nebude pripravená        | 9        | V tlačiarni nebude žiaden papier | 7          | Kuchár kontroluje tlačiareň raz za čas | 5         | 315                            | Červené kontrolné svetlo a akustický signál v prípade zaseknutia papiera alebo zbytočného papiera | Šéfkuchár kuchyne                         | Červené alarmové hlásenie a akustický signál v prípade zaseknutia papiera alebo zbytočného papiera | 9        | 2          | 5         | 90  |
| Total Risk priority Number     |                             |                                |          |                                  |            |  |           | Resulting Risk priority Number |   |   |  |          |            |           |     |

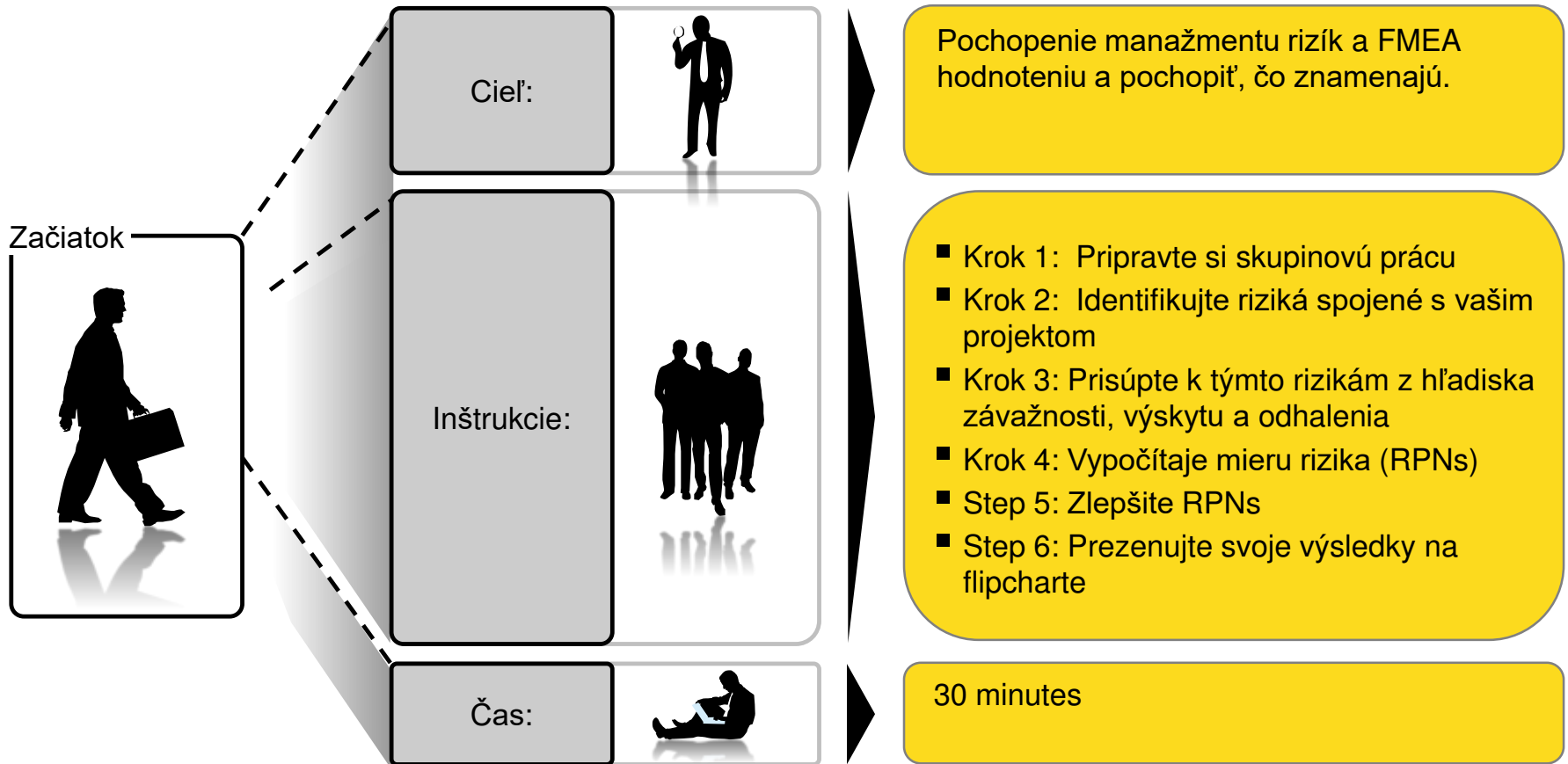
## Učenie sa z chýb

- Definujte dôvody pre (možné) poškodenie (požiar, nehoda, ...)
- Opíšte chránený tovar = pozrite sa na svoje objekty (plány, technológie budov, IT, prístup, cesty, používanie, používatelia, zainteresované strany ...)
- Popíšte poškodenia
- Vzrast poškodenia (náklady, čas, potenciál pre obnovu, .. )

## Manažment rizika potrebuje:

- Jasne definované úlohy
- Úplnú zodpovednosť za jasne definované kompetenčné oblasti
- Jasné úlohy a jasné inštrukcie
- Pokryť iba tie najdôležitejšie aspekty
- Vzájomný prenos informácií včas a komplexne

# Skupinová práca



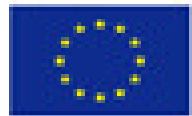
- Gerald Wagenhofer: UBW Unternehmensberatung Wagenhofer GmbH
- Master degree in Business Administration
- Gerald je certifikovaný **Lean Six Sigma Master Black Belt**, a trénoval viac než 500 Zelených a Čiernych Belts resp. projektových sponzorov v metodológii Lean Six Sigma, riadenie zmien a mäkké zručnosti, ako napríklad usmerňovanie, stretnutia, prezentačné zručnosti. Trénoval aj ľudí v oblasti stratégie a kontrolných / monitorovacích zručností
- Gerald pracuje ako biznis konzultant od roku 1991. Jeho hlavnou cieľovou skupinou je verejný sektor a neziskové organizácie. Projekty sa zaoberali hlavne procesmi a ich prepojením na stratégie príslušných organizácií



Tento tréningový materiál bol certifikovaný podľa pravidiel **ECQA– European Certification and Qualification Association**.

Verzia tréningového materiálu bola vypracovaná Komisiou pre pracovnú pozíciu pre **ECQA- Certifikovaný tréningový program “Manažment dedičstva:**

- **Burghauptmannschaft Österreich** ([www.burghauptmannschaft.at](http://www.burghauptmannschaft.at)), Austria: Elisabeth Bauer
- **National Trust for Places of Historic Interest or Natural Beauty** ([www.nationaltrust.org.uk](http://www.nationaltrust.org.uk)), UK: Rory Cullen
- **Centro Universitario Europeo per i Beni Culturali** ([www.univeur.org](http://www.univeur.org)), Italy: Fabio Pollice
- **Landcommanderij Alden Biesen**, ([www.alden-biesen.be](http://www.alden-biesen.be)), Belgium: Guy Tilkin
- **Magyar Reneszansz Alapítvány**, ([www.magyar-reneszansz.hu](http://www.magyar-reneszansz.hu)), Hungary: Graham Bell
- **Národný Trust n.o.**, ([www.nt.sk](http://www.nt.sk)), Slovakia: Michaela Kubikova
- **Secretaria Geral da Presidência da República**, ([www.presidencia.pt](http://www.presidencia.pt)), Portugal: Pedro Vaz
- **UBW Unternehmensberatung Wagenhofer GmbH**, ([www.ubw-consulting.eu](http://www.ubw-consulting.eu)), Austria: Gerald Wagenhofer



Erasmus+

Tento projekt je spolufinancovaný s podporou európskej komisie. Táto publikácia odráža názory len autora a Komisia nemôže byť zodpovedná za akékoľvek použitie ktoré môže byť spôsobené informáciami v nej obsiahnutých .



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