

Manager:

- Analyze large amounts of information.
- Make decisions quickly.
- Apply sophisticated 專業熟悉 analysis technique.

Decision-making process: (系統分析步驟)

- | | |
|---------------------------|----------------------------|
| 1. Problem identification | 4. Solution test 模擬測試 |
| 2. Data collection | 5. Solution selection |
| 3. Solution generation | 6. Solution implementation |

Operational 結構化

At the **operational level**, employees develop, control, and maintain core business activities required to run the day-to-day operations.

在運營層面，員工開發，控制和維護日常運營所需的核心業務活動

Operational decisions affect how the firm is run from day to day.

運營決策會影響公司的日常運營

Structured decisions, which arise when established processes offer potential solutions.

為既定流程提供潛在解決方案時出現的結構化決策

Managerial 半結構化

At the **managerial level**, employees are continuously evaluating company operations to hone the firm's abilities to identify, adapt to, and leverage change.

在管理方面，員工不斷評估公司的運營狀況，以磨練公司識別、適應和利用變化的能力

Managerial decisions concern how the organization should achieve the goal and objectives set by its strategy, and they are usually the responsibility of mid-level management.

管理決策關係到組織應如何實現其戰略設定的目標和目的，通常是中層管理人員的責任

Semistructured decisions occur in situations in which a few established processes help to evaluate potential solutions, but not enough to lead to definite recommended decision.

半結構化決策發生在，既定流程有助於評估潛在解決方案，但不足以導致確定的推薦決策的情況下

Strategic 非結構化

At the **strategic level**, managers develop overall business strategies, goals, and objectives as part of the company's strategic plan.

在戰略層面，管理人員應制定總體業務戰略、目標，並將其作為公司戰略計劃的一部分

Strategic decisions involve higher level issues concerned with the overall direction of the organization.

戰略決策涉及與組織總體方向有關的更高層次的問題

Unstructured decisions occurring in situations in which no procedures or rules exist to guide decision makers toward the correct choice.

在沒有程序或規則來指導決策者做出正確選擇的情況下發生的非結構化決策

A **project** is a temporary activity a company undertakes to create a unique product, service, or result.

專案是公司為創建獨特的產品、服務而進行的一項臨時活動

Metrics(衡量專案用) are measurements that evaluate results to determine whether a project is meeting its goals.

度量是評估結果以確定專案是否達到其目標的度量

Critical success factors (CSFs) are the crucial steps companies perform to achieve their goals and objectives and implement their strategies.

關鍵成功因素 (CSF) 是公司為實現目標和實施策略所採取的關鍵步驟

- 高品質、保持競爭優勢、降低成本、增加顧客滿意度、挖角留人才

Key performance indicators (KPIs) are the quantifiable metrics a company uses to evaluate progress toward critical success factors.

關鍵績效指標 (KPI) 是公司用來評估實現關鍵成功因素的進度的可量化指標

- 離職率、客服第一時間回覆率、產品退貨率、新顧客數、顧客平均花費

先有 CSF(因素)才有 KPI(指標)

KPI is **return on investment (ROI)**, which indicates the earning power of a project.

投資回報率 (ROI)，表示專案的盈利能力

Efficiency(效率) MIS metrics measure the performance of MIS itself, such as throughput, transaction speed, and system availability.

衡量 MIS 本身的性能，例如吞吐量，事務處理速度和系統可用性

Effectiveness(效果) MIS metrics measure the impact MIS has on business process and activities, including customer satisfaction and customer conversion rates.

衡量 MIS 對業務流程和活動的影響，包括客戶滿意度和客戶轉化率

Benchmarks(標竿), or baseline values the system seeks to attain

系統尋求達到的基準或基準值

Benchmarking(標竿化) is a process of continuously measuring system result, comparing those result of optimal system performance, and identify steps and procedures to improve system performance.

基準測試是不斷測量系統結果，比較最佳系統性能的結果並確定提高系統性能的步驟和過程的過程

A **model** is a simplified representation or abstraction of reality.

模型是簡化的表示、現實的抽象

- 計算風險，了解不確定性，更改變量、操縱時間來製定決策

Operational support systems 業務支援系統

Transactional information encompasses all the information contained within a single business process or unit of work and its primary purpose is to support the performance of daily operational or structured decisions.

交易資訊涵蓋單個業務流程或工作單元中包含的所有資訊，其主要目的是支援日常運營或結構化決策的執行

Online transaction processing (OLTP), capture of transaction and event information using technology to 線上交易處理（OLTP）是使用技術來捕獲交易和事件資訊

1. Process the information according to defined business rules
根據定義的業務規則處理資訊
2. Store the information 存儲資訊
3. Update existing information to reflect the new information
更新現有資訊以反映新資訊

TPS(交易處理系統) are **source documents**, the original transaction record.

TPS 是原始單據，原始交易記錄

- Creating, reading, updating, and deleting

Managerial support system 管理支援系統

Analytical information encompass all organizational information, and its primary purpose to support the performance of managerial analysis or semi structured decisions.

分析資訊涵蓋所有組織資訊，主要目的是支援管理分析或半結構化決策的執行

Online analytical processing (OLAP) is manipulation of information to create business intelligence in support of strategic decision making.

線上分析處理（OLAP）是對資訊的操縱，以創建商業智能以支援戰略決策

Decision support system (DSS) model information using OLAP, which provides assistance in evaluating and choosing among different courses of action.

決策支援系統（DSS）使用 OLAP 對資訊進行建模，該工具可幫助評估和選擇不同的行動方案

Strategic support system 戰略支援系統

An **executive information system (EIS)** is a specialized DSS that supports senior-level executives and unstructured. Moving up through the organizational pyramid.

主管資訊系統、經營決策系統，專業的 DSS

Granularity 詳細程度 Visualization 可視化 infographic 圖型化

Pie chart, bar chart, histogram 直條圖, sparkline 迷你圖, time-series chart.時間序列

Artificial intelligence (AI)

人工智慧，模擬人類思考於行為(推理能力、學習)

Intelligent system

智慧系統，AI 的各種不同商業應用

Machine learning is a type of AI that enables computers to both understand concepts in the environment, and also to learn.

機器學習，電腦能理解環境概念並學習

Weak AI、Strong AI (跟人一樣聰明)

Expert system are computerized advisory programs that imitate the reasoning processes of experts in solving difficult problems.

專家系統，電腦諮詢程序，模仿了專家在解決難題時的推理過程

Machine vision is the ability of a computer to "see" by digitizing an image, processing the data it contains, and taking some kind of action.

機器視覺是電腦通過數位化圖像，處理圖像中的數據並採取某種措施的能力

Machine vision sensitivity is the ability of a machine to see in dim light or to detect weak impulses at invisible wavelengths.

機器視覺靈敏度，機器在昏暗的光線下看到或檢測不可見波長下的脈衝的能力

Machine vision resolution is the extent to which a machine can differentiate between objects.

機器視覺解析能力，機器可以區分物體的程度

Neural Network attempt to emulate the way the human brain works

神經網絡，試圖模仿人腦的工作方式

Fuzzy logic mathematical method of handling imprecise or subjective information.

模糊邏輯，處理不精確或主觀信息的數學方法

模糊規則 → get feedback → 完善規則

Deep learning process that employs specialized algorithms to model and study complex dataset; the method is also used to establish relationships among data and datasets.

深度學習，採用專門的演算法來建模和研究複雜的數據集，也用於建立數據和數據集之間的關係
→ 建立結構、理解概念

Genetic algorithm is an AI system that mimics the evolutionary, survival-of-the-fittest process to generate increasingly better solutions to problem.

遺傳算法是一種 AI 系統，它模仿進化過程中的適者生存過程，以生成越來越好的問題解決方案

Intelligent agent is a special-purpose, knowledge-based information system that accomplish specific tasks on behalf of its users.

特定目的、替某個人完成特定任務

Virtual reality (VR) is a computer-simulated environment that can be a simulation of the real world or an imaginary world.

虛擬現實是電腦模擬的環境，可以模擬現實世界或虛構世界

Augmented reality (AR) viewing of the physical world with computer-generated layers of information added to it.

擴充實境，通過添加電腦生成的訊息層來增強對現實世界的現實觀看

Customer-facing processes, result in a product or service received by an organization's external customer.

顧客導向流程，客戶收到產品或服務

Business-facing processes, invisible to the external customer but essential to the effective management of the business

業務導向流程，客戶看不見，但對業務的有效管理至關重要

Business process modeling, the activity of creating a detailed flowchart or process map of a work process that shows its inputs, tasks, and activities in a structured sequence.

業務流程建模，即創建工作流程的詳細流程圖，以結構化順序顯示其輸入，任務和活動

Business process model, graphic description of a process, showing the sequence of process tasks, which developed for a specific purpose

業務流程模型，流程的圖形描述，顯示流程任務的順序，這些流程是為特定目的而開發的
比較：As-Is(原樣)→To-Be(改造後)

Workflow includes the tasks, activities, and responsibilities required to execute each step in a business process.

工作流包括執行業務流程中每個步驟所需的任務，活動和職責

→明確的，之道如何運作→規劃工作流(ex: 請假流程)

Workflow control systems monitor process to ensure tasks, activities, and responsibilities are executed as specified.

工作流控制系統監視過程以確保按規定執行任務，活動和職責

Operational business processes – automation 企業流程自動化

Operational business processes are static, routine, daily business processes such as stocking inventory checking out customers, or daily opening and closing process.

運營業務流程是靜態的，日常的，日常業務流程

Operationalized analytics makes analytics part of a business process.

運營分析，使分析成為業務流程的一部分

Business process improvement attempts to understand and measure the current process and make performance improvements accordingly.

業務流程改進，試圖理解和衡量當前流程，並相應地進行性能改進

Automation, process of computerizing manual task.

自動化，將手動任務電腦化的過程

Managerial business processes-streamlining 業務流程精簡化

Managerial business processes, semi dynamic, semi routine, monthly business process improvement.

管理業務流程，半動態，半常規，每月業務流程改進

Streamlining improves business process efficiencies by simplifying or eliminating unnecessary steps.

簡化通過簡化或消除不必要的步驟來提高業務流程效率

Bottlenecks, when resources reach full capacity and cannot handle any additional demands.

瓶頸，當資源達到最大容量並且無法處理任何其他需求時(產能已最高)

Redundancy, when a task is unnecessarily repeated.

冗餘，不必要地重複執行任務

品質管理→聆聽顧客心聲

Strategic business process reengineering 業務流程再造

Business process reengineering (BPR), analysis and redesign of workflow within and between enterprises.

企業內部和企業之間的業務流程再造（BPR），工作流分析和重新設計