

出國報告（出國類別：國際會議）

**2017 Gartner 資訊發展國際研討會  
Gartner Symposium ITxpo 2017**

服務機關：財政部財政資訊中心

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派赴國家：澳洲

出國期間：106.10.30-106.11.02

報告日期：107.2.1

分類號/目：其他/資訊策略

關鍵詞：數位分身、雲端及邊緣運算、沉浸式體驗、區塊鏈、事件驅動架構、技術成熟度曲線、魔法象限

## 摘 要

資訊科技日新月異，網際網路的普及促使相關的服務及應用，早已跨越組織及國界，任何組織的資訊技術、服務與應用也必須與時俱進，才能在網路的世界中，提供符合民眾多元的資訊服務需求，並能與其他機關有效進行資訊交換、流程整合或介接，進而提供便捷、高效能及創新的資訊服務，因此組織必須掌握資訊技術發展趨勢，了解其特性與優缺點，在適當的時機，引進適用的資訊技術，方能在確保成本效益的前提下，利用新興科技提供更好的服務、創造新的利基甚至提升競爭力，而 Gartner 這家具國際知名度的資訊科技調研顧問公司，透過旗下遍佈全球各地超過 1500 名資深(具備 15 年以上實務經驗)分析師，對資訊科技及相關應用深入且長期的觀察與研究，每年均會對資訊科技與應用的未來發展趨勢提出研究報告，並於年度國際研討會與來自各國主要政府機關、金融機構或企業等的資訊人員分享。

Gartner Symposium ITxpo 2017 會議其中一場於 10/30-11/02 在澳洲黃金海岸

Convention and Exhibition Centre 舉辦，場地寬廣，讓不同主軸的會議可以同步進行，另闢有專區供相關廠商展示產品及服務；循例，本次年會期間每天均邀請到業界領導廠商高階主管、技術或管理菁英，進行主題演說(Keynote Speech)帶動當天會議氣氛，並提出對未來的洞見，而今年會議的重點在於提出 2018 年十大策略科技趨勢的預測，這些趨勢又可歸納成三大類：智能(Intelligent)化、數位(Digital)化、及網格(Mesh)化，在智能化部分介紹人工智慧最新發展與應用；數位化部分則介紹數位分身、雲端及邊緣運算與沉浸式體驗(Immersive Experience)；網格化則介紹區塊鏈、事件驅動模型、適應性風險與信任評估等，面對這些新興科技趨勢，Gartner 也提出技術成熟度曲線(Hype Cycle)及魔法象限(Magic Quadrant)兩種評估工具，供組織評估引進新興科技的適當產品與時機，組織除要掌握科技發展趨勢外，亦需充分檢視自己的優劣勢及環境、資源條件，再評估引進新興科技的時機、成本及效益後，方能有效運用新興科技，創造新的價值。

# 參加 2017 Gartner 資訊發展國際研討會出國報告

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## 壹、目的

我國資通訊產業的發展已有數十年的時間，相關產品亦為我國出口及經濟發展的主力，政府機關推動電子化政府的努力亦未曾間斷過，在這段期間也有不少具體成果，讓民眾能夠享受到政府提供的便捷服務，也曾經吸引許多東南亞、非洲、東歐等國家爭相遠道而來，觀摩電子化政府的做法與成果，但隨著各國經濟與科技的發展，以及政府及民間的推動下，我國在電子化政府、電子商務、金融科技等資通訊應用的領域已迅速喪失領先地位，甚至逐漸落後其他國家；尤其近年來出現的顛覆性(Disruptive Innovation)創新，更使得原先落後的國家或組織，得以透過這些新興科技，不用循序漸進、按部就班，即可直接跳躍式的超車，因此掌握新興科技及應用趨勢，並在適當時機引進、應用，一方面可以與時俱進提供創新服務，另一方面亦可提升競爭力、確保競爭優勢。

從資通訊先進國家的發展歷程可以發現，面對顛覆性科技創新，我國目前尚著重於自動化及流程整合的階段，必須要翻轉思維改成從數位化來思考，這也是數位分身的精隨，要掌握所有物件包括所有民眾的相關數據，才能有進階的服務和價值，這也是運用物聯網(IOT)的目的，至於發掘服務機會或創造新的價值，則有賴大數據分析或人工智慧的運用；目前政府科技施政的重點在於 DIGI PLUS、5+2 新興產業、行動支付及發展數位經濟等方面，資通訊科技在這些政策中均扮演重要角色，面對來勢洶洶的顛覆性科技創新，我們必須能掌握其發展及應用趨勢，方能趨吉避凶，避免在這股趨勢洪流中被淹沒，進而能有效利用這些新興科技來創造競爭優勢及價值。

本次參與 Gartner Symposium ITxpo 2017 會議，雖分身乏術無法同時參與同步進行的各場會議，惟透過所能參與的各場次會議及場外蒐集到的資料，本報告將摘要分享十大新興科技趨勢及評估引進的方法供參，至於該公司調查研究所提出的看法，以及評估的方法是否精準，則尚待時間及實務的驗證，讀者須根據所處的情境、組織特性，以及經驗與智慧來做正確的評估與判斷。

## 貳、過程

本次臨時被指派與會，在行程安排上較為急迫，由於與會者眾多，且來自世界各地，會場附近的旅館一位難求，加上國內參與者也不少，在大會開始前一天直飛布里斯班的班機也是一位難求，建議有意參加這種會議者應及早準備；此外，主辦單位會事先在網站上公布議程讓有意與會者上網註冊，以及登記每天想參加的場次，每場會議限於場地大小，名額有限，亦需及早登記免得額滿無法參加；歷年來大會安排的各場次會議均以英文進行，今年則首次開放若干場會議以中文進行，一方面是因為華人市場及購買力強大，另一方面則是因為華人在資通訊科技的發展和應用有傑出的表現及重要的創新與突破。

大會於 10 月 30 日至 11 月 2 日期間，除最後一天會議至下午 3 點半結束外，每天從上午 8 點 45 分開始至下午 5 點或 5 點 30 分止(議程詳如附錄)，會議內容圍繞著三大主軸：包括 1.資訊科技 2.管理與領導 3.企業策略，同一時段同步進行多主軸多場會議，與會者同一時段只能選擇參與其中一場會議，本次參與會議場次如下：

### 一、2017 年 10 月 30 日

(一)Orientation(活動介紹)

(二)Industry Opening Guest Keynote:The Neurogeneration:A new Era in Brain Augmentation & Enhancement

(三)The Future of Digital Government:Platforms and Ecosystems

(四)To the Point:Win-Win Situation—Enhance the Customer Experience With Self-Funding Technology

(五)Industry Closing Keynote:The Principles Behind Great Customer Experiences

### 二、2017 年 10 月 31 日

(一)Gartner Analyst Opening Keynote:Creating Digital Value at Scale

(二)影響您客戶管理策略的十大科技預測

(三)The Top 10 Strategic Technology Trends for 2018

(四)Amazon Web Service:It's Always Day 1 Amazon's Tips for sustained innovation

(五)The CIO as Cultural Champion, Digital Designer and Enterprise Leader

### 三、2017 年 11 月 01 日

(一)智能機器、人工智能和認知計算：什麼能做和甚麼不能做？

(二)How to Optimize Your Data Management Investment Through People, Process, and Technology Initiatives

(三)Driving Business Reinvention in the Disruptive Era. Do you Have What it Takes

(四)From APIs to Digital Platforms:API Economy Lessons for Building an Ecosystem

四、2017年11月02日

(一)Mastermind Keynote:Building The Quantum Future with Michael J.Blercuk

(二)Using AI Conversational Platforms for Customer Experience—Better, Faster and Cheaper

(三)Closing Keynote Signature—Willful Disruption and Seven Disruptions You Might Not See Coming

除了正式會議之外，主辦單位於午餐時間邀請資深管理顧問、業界先進等專家，發表專題演講分享簡報及管理技巧；此外第一天晚上也安排盛大接待晚宴，讓與會各國來賓有互相交流機會，會議期間也適逢萬聖節，當天晚上則安排化妝晚宴；整體而言，主辦單位在場地、議程、餐點及活動安排方面，

讓與會者能感受到細心溫暖的服務。

### 叁、報告重點

本次會議分別從資訊科技、領導與管理，以及策略等三個面向介紹資訊科技及相關應用的發展及趨勢，主要原因在於資通訊科技已十分普及，組織及一般民眾均已十分依賴資通訊服務來處理日常事務，因此資訊科技的發展與應用會影響組織與民眾的業務營運與日常生活，以及組織與民眾之間的互動或交易方式，這也代表處理事務原有的分工和整合方式會發生變化，組織管理階層就必須善用新興科技、調整管理方式，而領導階層亦須將資訊科技納入組織策略來思考，方能有效提升組織及個人競爭力及工作效能；不過科技的引進勢需付出代價，包括有形及無形的代價，也就是除了資金的投入外，組織也會受到衝擊，而組織調適、變革的過程必然面臨挑戰及風險，另一方面產品的成熟度、供應商的能力與前景等，都是攸關引進資通訊科技成敗的關鍵因素，有鑑於此；Gartner 公司提出以下兩項工具供組織評估運用，讓資訊科技的引進，有初步的決策參考。

#### 一、Gartner 評估新興科技的方法

##### (一) 技術成熟度曲線(Hype Cycle)

Gartner 在 1995 年發表了「技術成熟度曲線」(Hype Cycle) 理論，用來分析技術發展趨勢與科技產品的生命週期，通常新技術的發展，會經歷啟動、高峰、泡沫化、技術成熟，最後達到應用高峰等幾個階段(圖 1)。



〈圖 1〉技術成熟度曲線 (hype cycle)

Gartner 技術成熟度曲線的五個階段包括：

1. 科技創新的啟動階段(Innovation Trigger)在此階段，媒體會大肆報導，非理性渲染，產品被廣泛討論。
2. 過度期望的高峰階段(Peak of Inflated Expectations)在此階段，民眾對科技創新產生不切實際的期待，雖然有些創新應用是成功的，但通常失敗的案例更多。
3. 泡沫化的谷底階段(Trough of Disillusionment)在此階段，科技創新無法滿足過度的期待，所以很快的退流行，媒體也不再關注該科技創新。
4. 應用擴散階段(Slope of Enlightenment)在此階段，雖然媒體不再討論，但是仍有少數不死心的企業，不斷改良該技術，並做出成功的實際應用案例。
5. 生產力高原期階段(Plateau of Productivity)在此階段，科技創新產生的利益與潛力被市場接受，技術被廣泛採用，進入成熟的階段。

以下圖(圖 2)為例，虛擬實境、手勢控制、企業 3D 列印等技術正處於應用擴散階段(Slope of Enlightenment)階段，而擴增實境、混和雲、消費者 3D 列印等，處於泡沫化的谷底階段，而量子計算、智慧機器人、物聯網平台則處於科技創新的啟動階段。



〈圖 2〉新興資訊科技技術成熟度曲線案例



## (二) 魔法象限(Magic Quadrant)

魔法象限(圖 3)主要功能為，評估資通訊產品或服務的供應廠商在相關市場上的競爭地位，及客戶使用經驗和評價，因此可供組織在引進或購買資通訊科技產品或服務時的決策參考；魔法象限的評估標準主要可分成兩個面向，橫軸：前瞻性，及縱軸：執行能力。

1. 前瞻性(Completeness of Vision)的評估細項，包括：品牌對市場了解程度、創新能力、營運模式、區域策略、產業策略、產品及服務策略、市場策略、銷售策略等。
2. 執行能力(Ability to Execute)的評估細項，包括：產品可行性、客戶體驗、產品在市場上的生存能力、宣傳及營銷能力、銷售能力、定價及應變能力、市場反應、業績紀錄等。

實務上廠商的資通訊產品或服務，必須在國際市場被普遍採用，而且必須達到一定的數量時，才有機會登上 Gartner 的魔法象限中。

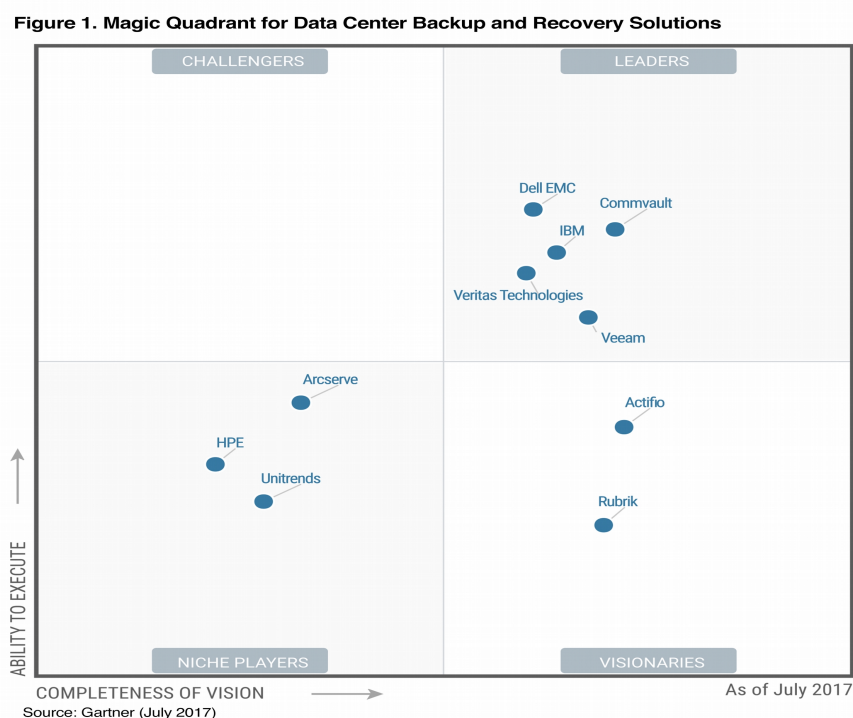


〈圖 3〉魔法象限 (Magic Quadrant)

根據產品或廠商在前述橫軸、縱軸的得分，在魔法象限中可將其區分為四大類，

包括：

1. 領導者(Leaders)：執行能力 (Ability to Execute) 和前瞻性 (Completeness of Vision) 得分都比較高的大型公司、業界領導者，擁有大量客群，在全球市場上擁有高知名度，具備強大的市場影響力，因此有能力影響和領導行業的發展。
2. 遠見者(Visionaries)：是指瞭解未來市場的發展狀況和前景，有潛力進行創新。屬於有遠見但是短期內無法實現的早期創業者，以及一些有遠見但在應變速度較差和調整能力不足的成熟廠商或供應商。在這個象限的廠商或者供應商，通常是新興產品市場中的中小企業，有創新能力有遠見，若能強化應變速度和調整能力，及各方面執行能力，則可望進入到領導者象限。
3. 挑戰者(Challengers)：執行能力很強，但是前瞻性不足。通常是較大型的成熟廠商，由於在特定市場比較成熟、市場執行能力很強，但是在新興產品市場的拓展上尚未有發展計畫。因此若能繼續保持強大的執行能力，同時設法在新興產品市場上進行前瞻性突破，也有望擠身領導者的行列或象限。
4. 固守利基者 (Niche Players)：執行能力和前瞻性都不足，在特定市場有不錯的表現，但仍未超越大型的成熟廠商或者供應商。通常在某特定領域、專業領域的廠商，或是新設立的企業。



〈圖 4〉資料中心備援及復原產品魔法象限

以上圖(圖 4)為例，有關資料中心之備援及復原產品的供應商中，Dell EMC、

Veritas Technologies、Commvault、IBM 等公司處於領導者地位，HPE、Arcserve 等公司處於固守利基者地位，而 Actifio、Rubrik 等公司則處於遠見者的地位。

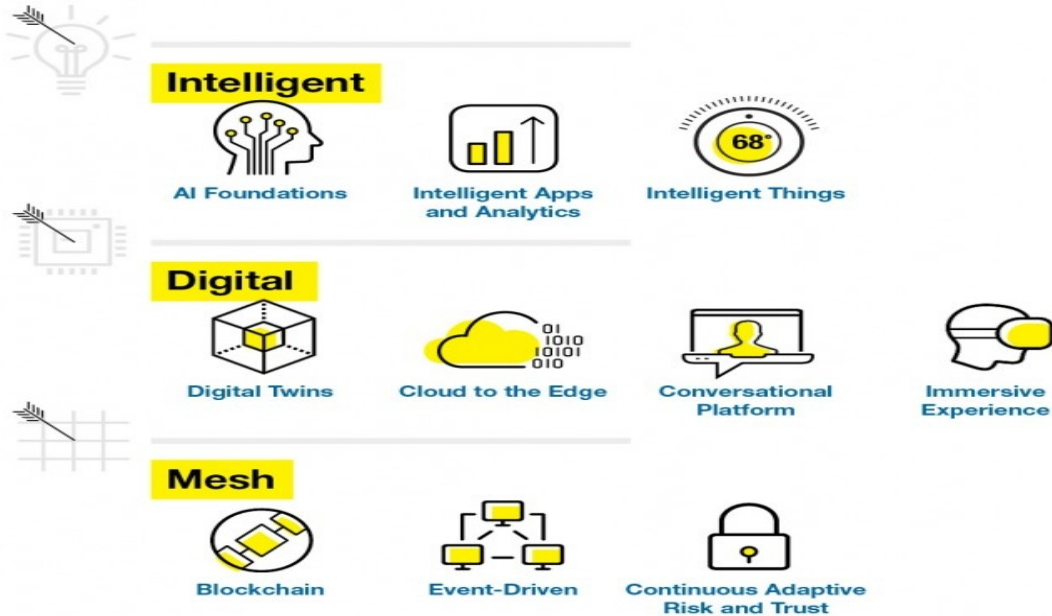
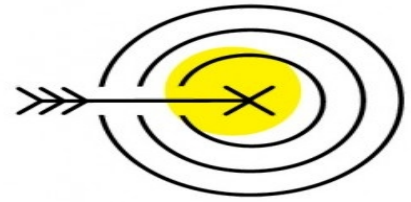
Gartner 會定期公布技術成熟度曲線及魔法象限最新調查研究結果，就特定科技或產品的終端客戶而言，可以根據技術成熟度來決定適當引進時機，接著可利用魔法象限來決定適當的供應商；而從產業的觀點來看，中上游的廠商亦可利用前述工具做為選擇開發產品要引用的技術，及選擇供應鏈上下游合作廠商的決策參考，在技術成熟度曲線中不同階段的技術有不同的普及程度，以及不同的泡沫化風險；同樣的，在魔法象限中位於不同象限的供應商，具有不同的發展前景、市場影響力及競爭力，可藉以判斷供應商永續經營能力，以及產品的可靠性，因此，產業中上游的廠商可根據本身現有條件，包括風險承受能力、資本或資源多寡以及市場開拓能力或市場影響力等，來決定開發新產品的科技組合，以及上下游供應商；對於想開拓新市場者，可以考慮技術成熟度曲線中位於前期階段的科技組合，雖然風險較高，但有可能開拓新藍海市場，而選擇技術成熟度曲線中位於後期階段的科技組合，風險較低，但有可能會陷入較成熟的紅海市場中與其他廠商進行割喉競爭。

## 二、2018 年十大策略科技趨勢預測（The Top 10 Strategic Technology Trends for 2018）

根據 Gartner 定義，策略性科技趨勢，是指正處於突破或崛起階段的科技，且未來可能造成廣泛應用及顛覆性(Disruptive)影響的趨勢；其特性在於具備快速成長、變動性高，且在未來五年內可能有爆發性的成長。

Gartner 將策略性科技趨勢分為三大類，包括：智慧化(Intelligent)、數位化(Digital)及網格化 Mesh)三大類〈圖 5〉，但彼此間密不可分，結合這三科技所產出的數位分析模型、商業平台及各種智慧服務，將徹底改變企業的競爭基礎，並有效提升企業競爭力；謹就三類策略性科技趨勢摘要說明如下：

# Top 10 Strategic Technology Trends for 2018



[gartner.com/SmarterWithGartner](http://gartner.com/SmarterWithGartner)

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〈圖 5〉 2018 年十大策略科技趨勢

- (一)智慧 (Intelligent) 化：人工智慧(Artificial intelligence:AI)目前已普遍被各個專業領域運用，例如醫療診斷、金融理財服務、客戶服務、裝配生產線、人臉辨識、語音辨識、圍棋、自駕車、語音助理等領域，均有不錯的表現；雖然現階段處理目標定義清楚、特定範圍的專業領域議題，較能發揮實用價值，但隨著數位化的普及，數據資料庫累積更多的資訊，腦神經科學，以及深度學習等演算法及高性能運算(High Performance Computing：HPC)平台的迅速發展，未來運用人工智慧的領域及範圍將迅速擴大。根據麥肯錫研究的預估，到 2030 年前，因為智慧自動化科技的崛起，包括零售、客服、仲介、低階製造等行業在全球將有 8 億個工作機會消失。
- (二)數位 (Digital) 化：隨著電子商務、虛實整合、感測器、物聯網、行動裝置及穿戴裝置、虛擬實境、擴增實境等技術的進步和普及，數位化的能力與範圍將快速

提升與擴大，無論在工作上或日常生活方面，人們越來越依賴數位化產品，對於真實世界的認知和控制，也逐漸透過數位化產品來完成，促成虛擬世界與真實世界邁向無縫銜接、緊密整合的境界，為使用者帶來沈浸式(Immersive)虛實整合的體驗。

(三)網格 (Mesh) 化：隨著網際網路、行動網路、物聯網等，網路技術的發展，網路速度不斷提升，與真實世界的人、組織、系統及物件也越來越多，近年來所匯集資料的範圍、種類、數量有爆炸性的成長，促成許多資通訊科技的創新應用以及新的商業機會，這些發展對於人類生活、組織營運、商業模式、經濟及金融發展等各領域，均產生顛覆性的影響。

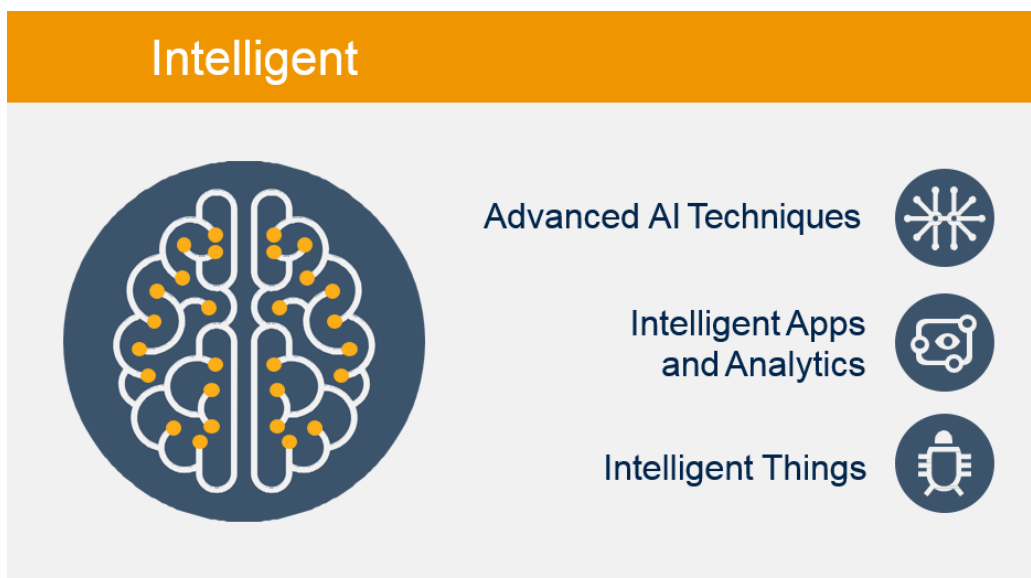
其中「區塊鏈(Block Chain)」已經連續兩年被列入十大科技發展趨勢，可看出 Gartner 持續關注區塊鏈技術未來的發展，雖然區塊鏈技術運用共享帳簿技術(Distributed Ledger Technology:DLT)，強調具有去中心化、安全、透明的特性，在區塊鏈中所有的成員，不論是上下游或是協同關係，都能夠透過區塊鏈來快速的共享大量的資源；但隨著南韓及日本等國家，傳出比特幣交易所被駭，大量比特幣失竊，區塊鏈的安全性已遭到強烈質疑和挑戰，若能克服安全疑慮，以及交易效率，區塊鏈的未來發展仍值得期待。

Gartner 副總裁暨傑出分析師 David Cearley 表示：「Gartner 2018 年十大策略科技趨勢與智慧數位網格(Intelligent Digital Mesh)息息相關。智慧數位網格是未來數位商業和生態系的基礎，IT 主管必須將這些科技趨勢納入創新策略，否則組織可能會喪失競爭力，輸給納入這些新興科技的對手。

十大策略科技趨勢中前三項是探討人工智慧(Intelligent)與機器學習如何滲透所有事物，將成為未來五年科技廠商的主要戰場；接下來四項趨勢聚焦在如何整合數位與實體世界，以創造一個沉浸式的數位(Digital)化環境；最後三項趨勢有關網格(Mesh)化則強調隨著越來越多的個人、企業、裝置、內容與服務之間形成連結，促使我們必須思考如何從中獲益，取得數位商業成果。以下摘要說明三大類趨勢下的各分項趨勢：

#### (一)智慧化趨勢〈圖 6〉

##### 1.先進 AI 技術(Advanced AI Techniques)



〈圖 6〉智慧化趨勢

Gartner 預測在 2020 年以前，科技廠商的主要戰場將在於如何打造能夠學習、調適(Adaptive)甚至可能自主(Autonomus)行動的系統。在 2025 年以前，組織是否具備使用人工智慧來強化決策、改造商業模式(Business Model)與生態系(Ecosystem)，同時擁有打造全新顧客體驗的能力，將決定數位計畫推動的成果。

David Cearley 認為：「人工智慧技術快速演進，未來組織必須在相關技術、製程與工具上大舉投資，才能成功利用這些技術來打造人工智慧增強(AI-enhanced)系統。投資的範圍可能包括資料的蒐集、準備及整合，以及演算法、智能平台、智能模式的建立和訓練智能系統的方法。這也需要資料科學家、開發人員與商業流程負責人等相關部門的須攜手合作。」

## 2. 智慧 Apps 與分析技術(Analytics)

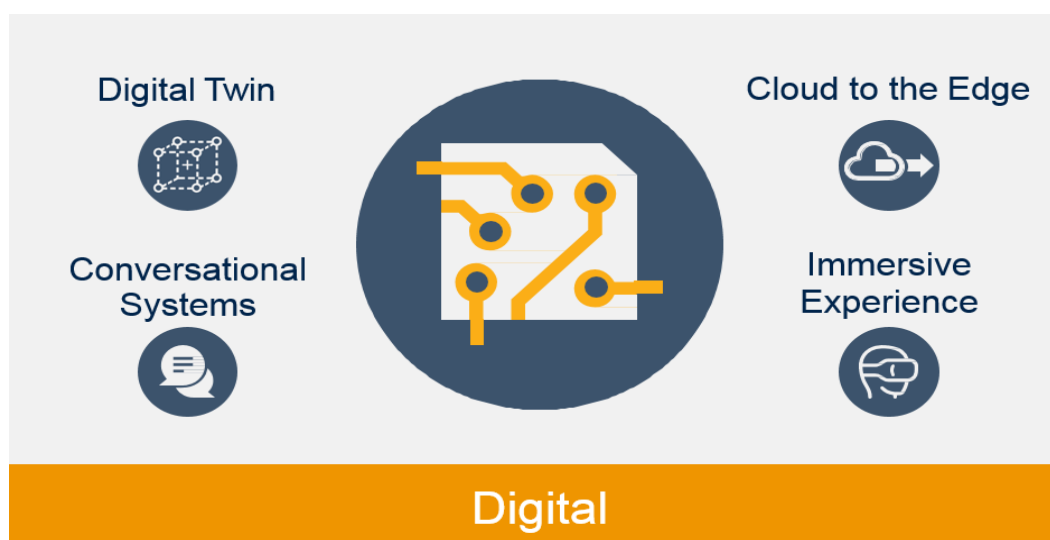
David Cearley 指出：「探討智慧型 Apps 時，我們必須把它當作是一種擴大人類活動範圍的工具，而非只是取代人力。這種工具可以促成增強分析(Augmented Analytics)，這是具有策略性成長潛力的領域，可利用機器學習來自動蒐集和準備資料、挖掘(Mining)資料中有意義的線索，也就是所謂的洞察力(Insight)並將其分享給不同類型的客戶、營運人員以及資料科學家。」

人工智慧已成為企業資源規劃(ERP)等各種軟體及服務市場的下一個主要戰場。套裝軟體與服務供應商應規劃如何使用人工智慧，以先進分析、智慧流程與進階使用者體驗的方式，提升新版本產品和服務的商業價值。

### 3.智慧物件(Intelligent Things)

智慧物件是指能夠按照固定的程式或模型執行任務，並運用人工智慧進行高階行為和活動的實體物件，並且能夠以更接近人類、更自然的方式與周遭環境或人類進行互動。許多物件結合人工智慧強化了既有功能，產生新型智慧物件如自駕汽車、機器人和無人機等，相關技術的進展，及強化的功能，使得智慧物件更具實用和商業價值，而智慧物件的普及，也促使產業的上、中、下游廠商，一直到終端消費者之間，有更趨緊密的結合，例如連結物聯網的智慧消費性與工業用系統。

#### (二)數位(Digital)化類趨勢 (圖 7)



〈圖 7〉數位化趨勢

### 4.數位分身(Digital Twin)

數位分身是指有關真實世界中的實體、物件、組織或系統的數位軌跡及記錄。未來三到五年由於物聯網，促使數位分身對本尊更具代表性，業界也常說數位分身比本尊更了解自己，目前在數位分身的領域中，業界認為物聯網最具發展潛力。組織對於業務相關對象，包括:客戶、員工、供應商、批發商、通路、產品、服務、流程、交易、市場、環境等，組織若有完整的數位分身規劃，就可大幅改善組織決策的精確性及決策效率，也有效提升組織反應能力及競爭力。這些數位分身透過資訊流與真實世界裡的對應物連結，並隨著真實對象狀態的改變而即時更新數位分身的相關數據，系統可以有效掌握並了解該對象的狀態，而能夠適時、適地針對特定對象做出回應，以便改善營運效能，提升營運績效與價值。佈署用數位分身是循序漸進的過程，從有計畫蒐集相關對象的數位資料和足跡開始，有計畫的匯總、歸類、儲存，提升收集正

確資料的能力、選用正確的分析方法與技術，並加以視覺化，方便理解與發現規則，讓組織可以有效率地針對策略目標做出回應。

## 5.雲端到邊緣(Cloud to the Edge)運算(圖八)

雲端服務龍頭 Amazon 長期發展雲端運算(Cloud Computing)服務，雲端服務產品推陳出新，最近卻突然轉變，開始重視邊緣運算(Edge Computing)，一口氣推出三項產品。同樣的，微軟和 SAP 也都開始主張邊緣運算的重要性，或布局邊緣運算。

邊緣運算就是一種就近運算的概念，將運算更靠近資料源所在的本地區網(Local Network)內運算，盡可能不用將資料回傳雲端，以減少資料往返雲端的等待時間及降低網路頻寬成本。邊緣運算通常是在本地端和雲端兩邊交界的附近做運算處理，但不是全部的資料都能放在本地端運算，還是會有些需要更進一步分析及判斷的資料，最後還是要傳回雲端來處理，或是做為長期存取的使用。

邊緣運算也適合用於佈署 IoT 應用，尤其是在新興 IoT 應用領域，例如自駕車、無人機、擴增實境(AR)/虛擬實境(VR)，以及機器人等，這些應用特別強調即時的影像分析及辨識處理能力，對於網路的低延遲和高頻寬要求極高，需要在數十毫秒甚至微秒時間內就要反應，然而透過網際網路傳輸往返雲端，至少需要上百毫秒才能反應過來，所以這類型的應用，就很適合採用邊緣運算架構。

邊緣運算因為是在靠近資料源所在的區域網路環境內運算，所以可以是在一臺大型運算設備，或者是很多個中、小型運算裝置或設備組成的本地端網路內運算，這些運算設備可以是個人所有的行動裝置(如智慧手機、穿戴式裝置)，也可以是終端設備(如閘道器、監視攝影機、銀行 ATM)，或是其他 IoT 裝置。因為運算裝置和裝置之間彼此靠得很近，網路傳輸更直接，如透過 Wi-Fi、藍牙等，所以傳遞資料變很快。

邊緣運算因為採用分散式運算架構，可將運算分散給靠近終端資料源的近端設備，以分攤原本在雲端運算的工作量，而不需將資料傳回雲端才能處理，因此速度變更快，甚至沒有網路，靠近終端的運算設備也能接手自己處理。

另一方面，由於 AI 技術的成熟，使得邊緣裝置的運算分析能力越來越強，已有廠商將機器學習、深度學習的能力帶進裝置內，使得邊緣裝置也能做到一些雲端能做的事，因此應用也越來越廣了。

至於邊緣運算的角色，最終目的並不在取代雲端運算，而是透過邊緣運算採用的分散式架構，讓集中式的雲可以去中心化，將雲端的邊際向外更進一步延伸，更靠近



用戶所在的網路，以滿足對於低網路延遲、更高頻寬需求的新興應用，兩者並不衝突。



(圖 8) 邊緣運算架構

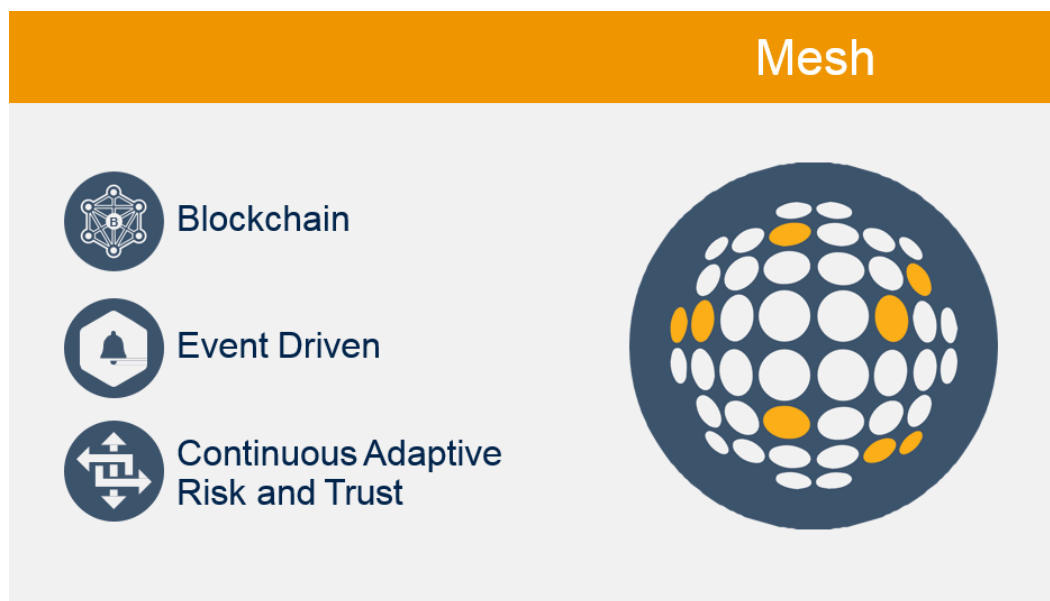
## 6. 對話式系統(Conversational Systems)

隨著人工智慧語音辨識技術的成熟，Apple、Amazon、Microsoft 三大科技公司先後推出數位助理 Siri、Cortana、智慧音箱 Echo、Alexa、Home pod 等智慧產品，讓消費者可以透過口語方式與行動裝置、家電設備、電腦系統互動，取得所需資訊或服務，這種人機介面大幅提升使用方便性及效率，並改善使用體驗；這是將轉譯(interpret)的責任由使用者轉移到電腦平台上，平台接收到使用者的問題或指令後，透過系統轉譯後做出回應，提供解答或要求輸入更多內容。這種人工智慧帶動的人機互動典範轉移(paradigm shift)在未來幾年內，將成為設計人機互動的流程，而且將會透過專用硬體、核心作業系統、平台與應用程式來提供。

## 7. 沉浸式體驗(Immersive Experience)

前述對話式介面改變人類控制數位世界的方式，但虛擬實境(Virtual Reality)、擴增實境(Augmented Reality)與混合實境(Mixed Reality)等沉浸式體驗技術，則除了改變人機互動方式外，也改變人類對數位世界的看法。目前虛擬實境(VR)與擴增實境(AR)市場的發展仍未成熟且尚未有較具共識、聚焦的應用，因此雖然出現許多新奇的虛擬實境應用，主要為電玩、360 度環景影片等先進娛樂的應用，目前尚未出現較具實用價值的應用。企業必須檢視哪些特定的生活情境或領域，是虛擬實境與擴增實境可以用來提升員工及客戶生產力，或用來強化設計、教育訓練以及流程視覺化的機會，以發掘潛在應用價值。

### (三)網格(Mesh)化趨勢 (圖 9)



〈圖 9〉網格化趨勢

## 8. 區塊鏈(Block Chain)

區塊鏈設計之主要精神，在於建立具容錯性的分散式系統，即使部分節點失效仍可確保系統正常運作，讓多個無信任基礎的節點達成共識，並確保資訊傳遞的一致性，比特幣(Bitcoin)就是根據這種設計理念下，在網路世界所創造出來的虛擬貨幣；其實可以將區塊鏈看成是公眾的電子記帳資料庫，是一種在公眾網路上記錄交易資料的技術，這些交易紀錄是記在一個「去中心化的網路分散式資料庫」，透過參與的大眾，集體維護讓區塊鏈裡面的資料更加可靠，實務上，區塊鏈是藉著複雜的密碼學來將資料加密，再透過分散式演算法，讓互聯網最讓人擔憂的安全信任問題，可以在不需要第三方介入的前提下讓使用者達成共識，以非常低的成本解決了網路上信任與資料可靠度的問題；在這樣的設計下，區塊鏈技術平台具備下列特色：

### (1)去中心化

區塊鏈最重要的特色，就是去中心化，為了強調區塊鏈的共享性，讓使用者可以不依靠額外的管理機構和硬體設施、讓它不需要中心機制，因此每一個區塊鏈上的資料都分別儲存在不同的雲端上，核算和儲存都是分散式的，每個節點都需要自我驗證、傳遞和管理，這個去中心化是區塊鏈最重要的核心特色。

## (2)開放性

區塊鏈技術的基礎來自開源(open source)，除了交易的資訊會被加密之外，所有的運算數據都是對外開放，任何人都可以透過公開的介面去查詢區塊鏈中的數據，系統資訊十分透明。

## (3)匿名性

因為區塊鏈是透過分散式的演算去處理數據，因此沒有人可以隨意修改網路上的數據，排除人為操控的可能，讓區塊鏈本身相對安全，因為區塊鏈上的資訊不需要公開驗證，彼此之間的資訊傳遞都可以匿名進行。

## (4)不可竄改性

區塊鏈中的每一筆資料一旦寫入就不可以再更改，只要資料被驗證完就永久的寫入該區塊中，透過一對一函數 Hashcash 演算法，確保資料不會輕易被竄改，這種函數很容易可以被驗證但卻非常難以破解，無法輕易回推出原來的數值，因此資料不易被竄改，而且每個區塊得出的值也會被寫入下一個區塊中，確保區塊鏈之間的資料的正確及安全性。

區塊鏈的下一階段目標就是超級帳本(Hyperledger Fabric)，目前已有許多專門為大型企業所設計的商業導向區塊鏈模組，包含貨運追蹤、智慧合約等功能，可供企業建置佈署具商業價值的區塊鏈應用，由於區塊鏈具有共享帳本的特性，在區塊鏈中，上下游所有的成員，都能夠透過區塊鏈來快速的共享大量的資源，同時也能兼顧安全性，因此區塊鏈技術可以應用的範圍值得期待。

雖然區塊鏈剛開始的應用主要在金融服務業，其實區塊鏈尚有許多具潛力的應用，包括政府機關、醫療照護、製造業、媒體發行、身分確認、所有權的登記以及供應鏈等方面的應用；但 Gartner 認為在兩到三年內區塊鏈許多相關技術仍不夠成熟，尤其，最近日韓兩國比特幣交易所遭駭損失慘重，顯示區塊鏈的安全性及相關技術仍有待改善，才能促成廣泛的商業應用。

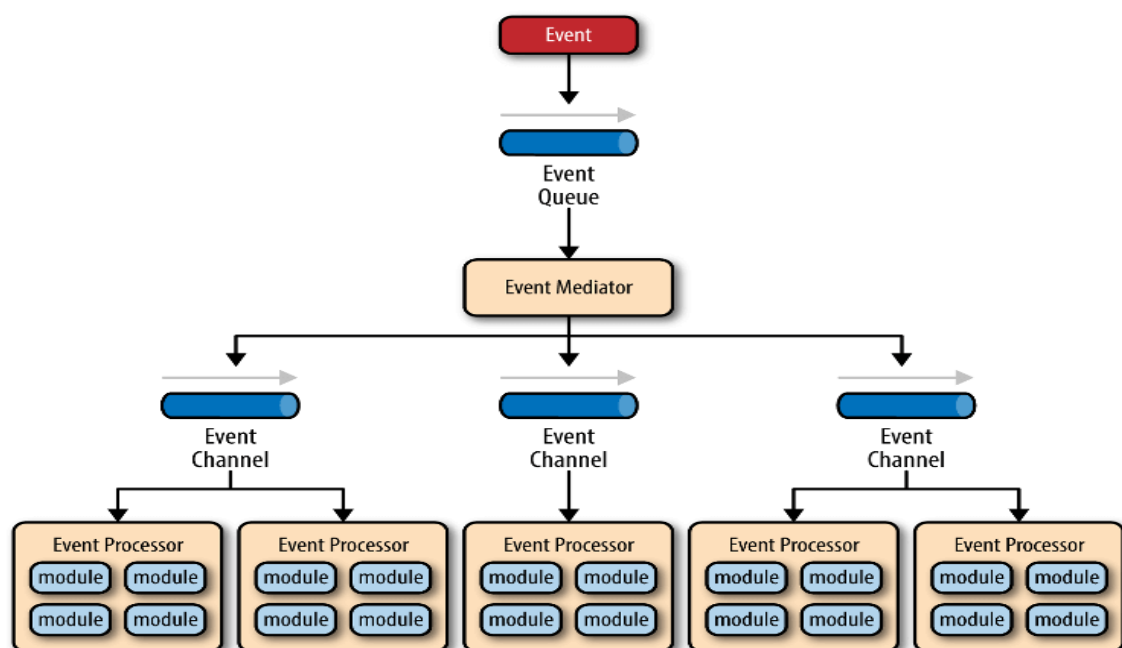
## 9. 事件驅動(Event Driven)

資訊科技日新月異，進步神速，在硬體方面，從大型主機集中處理架構、主從架構、多層次主從架構、雲端運算架構等，不斷推陳出新；在軟體發展方面也不遑多讓，從傳統的程序式語言到物件導向語言，這些發展的原因，除了在資訊科學以及資通訊硬體製造技術有長足的進步之外，實務運作方面的需求，也是重要促成因素；目前國

內的資訊系統多數仍採用互聯網基礎(web-based)物件導向軟體架構，硬體則多為多層主從架構或雲端運算架構，這些資訊系統的開發，多數仍是以傳統業務觀點，著重在關鍵流程及活動所設計開發，這樣的發展軌跡反映出實務上需要資訊系統能夠具備彈性擴充、快速佈署的能力；雖然物件導向語言已初具事件驅動程式設計的特性,就是程式不再是依序從頭執行到尾的一串指令,而是撰寫多段對應到不同事件的程序，但這主要是因為在互聯網基礎的架構下，人機互動透過網頁進行，使用者的輸出、輸入可以看成是一些事件，這裡所謂事件(event)是指一種狀態的改變(A Significant Change in State)，也就是某欄位的狀態發生改變，而促發對應的程序啟動處理，因此目前國內多數系統的事件驅動應用，主要在處理人機互動方面，在後端的業務流程方面，對應的資訊系統多數仍是以傳統業務流程觀點所設計。

隨著環境變動迅速、行動裝置普及、資訊系統的使用者或服務對象激增，資訊系統的負荷暴起暴落，這種現象在物聯網(IOT)的環境下，更是雪上加霜，資訊系統更需要有彈性分配系統資源、迅速反應的能力，因此有微服務(Micro Service)和事件驅動架構(Event Driven Architecture:EDA)的發展，讓程式元件的顆粒小型、獨立化，且只負責單一功能，彼此間利用 API 溝通，當事件發生時，能夠迅速處理，避免相關程序之間有互相等待、競爭資源的情況發生。

基本上事件驅動程式設計 (Event-driven programming) 是一種電腦程式設計方式。這種程式執行的流程是由使用者的動作或者是其他程式的訊息來決定的。相對於批次程式設計 (batch programming)，程式執行的流程是由程式設計師所決定；而事件驅動架構 (圖 10)就是透過事件進行溝通的軟體架構。主要分成四個部分：



(圖 10) 事件驅動架構

- (1)事件等候線 (event queue)：接收與暫存事件的區域
- (2)事件分派器 (event mediator)：將不同的事件分派到不同的業務邏輯單元
- (3)事件通道 (event channel)：事件分派器與處理器之間的聯繫管道
- (4)事件處理器 (event processor)：執行業務邏輯，處理完成後會觸發另一事件，啟動下一步操作

這種架構的優點為:

- (1)分散式的非同步架構，事件處理器之間高度獨立，軟體的擴充性佳
- (2)適用範圍廣，適合多數類型的應用
- (3)性能較佳，由於非同步處理事件的本質，軟體不易產生堵塞
- (4)事件處理器可以獨立地載入和卸載，容易佈署

而主要的缺點是：

- (1)涉及非同步程式設計（要考慮遠端通訊、失去回應等情況），開發相對複雜
- (2)因為事件處理涉及多個處理器，回推(roll back)非常困難
- (3)分散式和非同步特性導致這種架構較難以進行測試

鑒於事件驅動架構內部運作邏輯有別於傳統程序式處理架構，因此在分析設計時也有不同重點，在事件驅動架構下，業務分析的核心就是事件的識別。而傳統方法則是識別關鍵流程和活動。主要差別在於：傳統分析方法只分析到業務流程中的業務活動和互動點，而開發事件驅動架構時則需要分析時候分析到業務最底層，識別關鍵業務事件和事件分解、聚合關係，產生事件流程圖(EPC)。在具體分析內容方面，傳統方法只關心業務活動，忽略業務活動具體的啟動機制，業務活動完成後產生的業務事件。而事件驅動架構業務分析(EDA)方法，則需要開啟業務活動，識別業務活動的上游觸發條件和業務活動引起的業務物件狀態的變化，通常狀態變化點就是關鍵的事件識別點。

企業要掌握稍縱即逝的商機、要保有持續性的競爭優勢(Sustainable Competitive Advantage)就必須有彈性靈活的資源調度、佈署能力及業務流程，這需要隨時掌握狀

況，以及彈性應變能力，在業務量龐大、使用者(包括員工、客戶、往來企業等)多的組織，其關鍵就在具備彈性佈署能力、能夠同時應付使用量大幅變動的資訊系統，尤其是面對大數據、物聯網風潮來襲、步調快速多變的環境下，資訊系統架構必須迅速有效、低延遲的回應環境、業務、使用者等多元的需求，而事件驅動架構的系統就是這種背景下的產物，但要有效發揮這種系統的優點，有賴企業主管、資訊團隊、業務團隊等關係人，在系統開發設計時，具備事件驅動架構業務分析(EDA)方法的概念(Event Thinking)，這種思維下所開發的系統，才能發揮事件驅動架構的優點。

#### 10.持續適應風險與信任(Continuous Adaptive Risk and Trust)

服務品質、顧客信任是組織掌握商機、永續經營的關鍵，而資訊時代確保服務品質及客戶信任的基礎，則在資訊安全的維護，由於數位經濟蓬勃發展，連網服務無遠弗屆，且全球覆蓋率極高，資訊安全的風險暴露也高，加上駭客技術也日新月異，甚至有國家支持的駭客組織，對於資訊安全形成嚴重挑戰，就連一項標榜安全的區塊鏈技術，都一再被駭，顯示資訊安全的防護也必須與時俱進，方能有效確保組織的服務品質，以及贏得客戶的信任。

Gartner 認為資訊主管必須讓組織擁有持續適應風險與信任的能力，才能有效確保組織的資訊安全，並能在高風險的網路世界中，有計畫的推動數位計畫，而這種能力的建立，則有賴運用持續適應風險與信任評估法(Continuous Adaptive Risk and Trust Assessment; CARTA)，才能以風險及信任為基礎，進行持續調適，針對日新月異的資安風險，及時做出決策及回應。唯有讓安全基礎架構能適應各種網路資訊環境，讓安全防護的發展速度與數位業務並駕齊驅，組織才能在管理風險的同時掌握商機。

進行 CARTA 評估時，組織必須移除安全團隊與應用系統發展團隊之間的障礙，讓彼此攜手，完全透明化的合作。資料安全架構師必須在系統開發與業務流程的許多環節上，進行整合安全測試。此外，也要讓系統開發團隊與營運團隊密切合作，創造具敏捷性以及機動性的開發環境，達到「開發、資安與營運」(DevSecOps)三位一體的境界。利用軟體定義網路(Software Defined Network)、軟體定義儲存(Software Defined Storage)、軟體定義資料中心(Software Defined Data Center)等技術，讓 CARTA 能佈署、管理與監測「適應誘捕系統」(Adaptive Honeytrap)等網路誘騙手段，這種誘騙技術(Deception Technology)及時阻擋零時差攻擊、先進攻擊等駭客手法，讓組織具備持續適應風險與信任的能力。

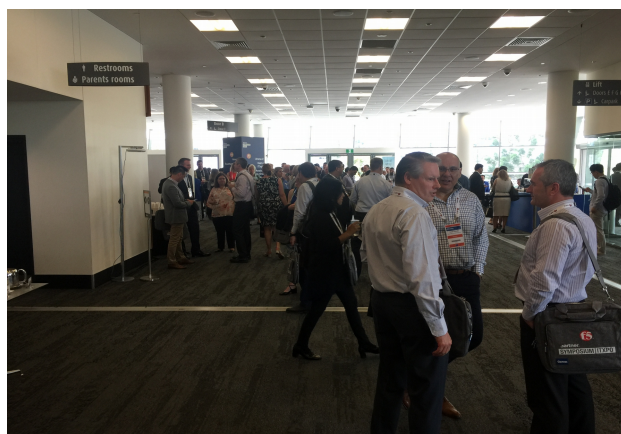
## 肆、心得與建議

### (一)心得

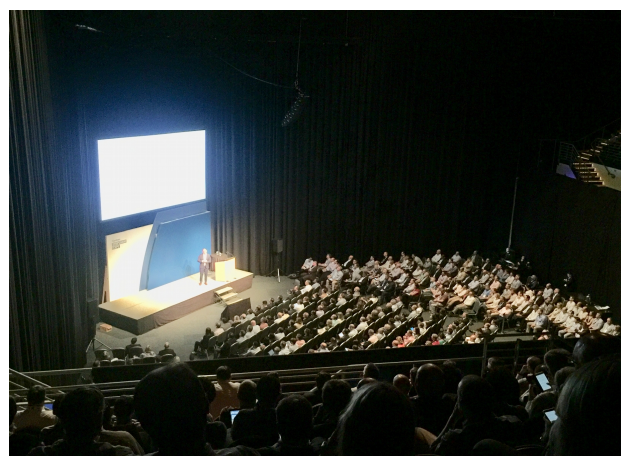
本次大會場地面積廣大，上下兩層將近2個足球場大小；且參加人員眾多、會議場次也多，與會人員須熟悉場地，掌握會議時間與地點，及早前往會議室，尤其是熱門議題、或知名廠商、講者的場次，經常爆滿、座無虛席，太晚前往常找不到座位。



(圖 11)The Star 旅館至會場空橋全景



(圖 12) 會場場景 1 (中場休息意見交流時間)



(圖 13) 會場場景 2 (Keynote Speech)



(圖 14) 台灣團及現場工作人員萬聖節合照

今年主辦單位首次安排華語場次，講者全場用華語演說，吸引許多華人參加，而本次大會的三大獎項，包括商業模式創新獎、服務創新獎及節省成本獎的決賽，採現場觀眾投票方式競賽，由於華人的支持，全部由國內銀行獲得，台灣大獲全勝；足見華人市場，以及技術發展的潛力與影響力，不容小覷。

這次大會除了介紹前述十大策略科技發展趨勢外，從現場意見交流及問題討論，可以感受及觀察到一些潛在影響力不容忽視的現象和發展趨勢，包括：

#### 1. 人工智慧改變人類的工作方式、思考方式及生活方式

隨著資訊科技的進步、產品推陳出新，人們對於外在事物的理解和看法，逐漸由科技所定義，例如，多數人對於新事物的瞭解、採購決策資訊的蒐集、交通狀況、天氣狀況、旅遊景點及旅館資訊的掌握，通常會上網 Google 一下，或用手機上網查詢、訂購，使得越來越多事情不必親赴現場，在網路上就可以處理完成，而人工智慧憑藉其強大的記憶、學習、推理、辨識、預測等能力，可以擴大或增強及改變人類對世界的認知，尤其在行動裝置、穿戴裝置運算、儲存及連網能力提升後，人工智慧產品會小型化，深入人類生活各領域，進而收集到更多數據，加上機器深度學習的能力，讓人工智慧的 IQ 更強大，造成人類和電腦系統之間分工的重分配，預估 2020 年人類將失去 500 萬個工作機會，美國在 2025 年將失去 60% 的工作機會，嚴重影響人類的工作方式、思考方式及生活方式，因此也有人提議課徵機器人稅(Robot Tax)或基本所得(Universal Basic Income)來因應。

#### 2. 數位化轉型實現創新服務與價值



傳統上資通訊科技的應用，著重在將現有工作、流程自動化，關注的焦點在於現有的服務和功能上，所獲得的效益主要是降低人力成本、提升效率及方便性；而數位化重點在於要收集哪些數據、如何收集、如何分析、尋找哪種線索、支援哪種決策、創造哪些服務和效益等面向，關注的焦點在未來、環境狀況及客戶需求，根據這些思維來佈署收集數據的感測器、APP、分析處理平台及軟體系統，才能真正做到數位化轉型，也為未來利用數據分析，創新加值奠定基礎。

### 3. 運用隨選雲端服務迅速滿足非核心業務服務需求

雖然許多人對於雲端服務的資訊安全仍存有疑慮，市場上已有資訊科技大廠如 Amazon, Google 等公司，提供隨選(On Demand)雲端服務，我國部分金融業者亦採用這種服務，迅速建置、佈署一些非核心系統，這種服務的優點在於所需建置時間短、維運人力少，主要是基於成本效益的考量，但是他們的核心系統仍維持自行維運，顯見資訊資產的安全，以及核心系統的服務水準仍是重要考量因素，因此，要採用廠商所提供的隨選雲端服務，考慮因素除了成本效益之外，尚須考慮安全、服務水準及客戶信任等因素，亦須納入考慮，重點在於組織需建立符合管理政策的事前審核機制，做為佈署資訊系統組合(Portfolio)的依據。

### 4. 量子(Quantum)電腦顛覆資訊安全

主辦單位所安排的幾場 Keynote speech 中，位於資通訊科技創新最前沿者應該是量子電腦的發展，目前中國、美國、澳洲等國家均積極投入資源進行研究開發，其中美國 IBM 公司已開發出量子電腦的雛型系統；由於電腦的 CPU 製造已進入奈米等級，我國台積電是業界首屈一指的晶圓代工廠，當然也代工生產 CPU，最新製程達到 3 奈米等級，雖已接近原子等級，但基本運作單位仍是位元(bit)，只能記錄 0 或 1 兩種狀態，但量子電腦是在原子等級運作，一個原子在不同能量刺激下，可以有許多不同的能階狀態，這些狀態可以記錄遠遠超過 0、1 兩種狀態的許多倍，單位時間可以處理的資訊量及速度也超過傳統電腦 10 的 N 次方倍，而量子間傳遞訊息所需時間趨近於 0，因此所產生的影響除了運算效率大幅提升外，對於資訊安全將造成災難性的破壞，因為量子電腦破解傳統加密方式，只需幾秒鐘就可完成；不過目前量子電腦還需要一段時間才能實用，我們只要持續關注、適時回應即可。

#### (二) 建議

本次大會吸引許多資訊主管及廠商參加，大會內容則聚焦在 10 大策略科技趨勢的發展，雖然從策略趨勢到實際運用之間尚有一段落差，不過 Gartner 認為，對於經

驗豐富的資訊主管而言，只要能掌握趨勢，在適當時機慎選科技產品，就有能力在成本效益的前提下，規劃行動方案，妥善運用新科技，並創造服務價值，個人經驗能力有限，謹就本次會議觀察所得，提出下列建議，期待有所助益，並請眾先進、前輩不吝指正：

#### 1.運用技術成熟度曲線 (Hype Cycle)評估新科技引進時機

Gartner 每年都會針對各種新資訊科技的應用成熟度，提出調研報告，組織應依據本身的資源條件及風險承受能力、創新應用能力及競爭策略，引進技術成熟度曲線中，不同階段的科技，來滿足組織及客戶潛在的需求。

#### 2.善用魔法象限(Magic Quadrant)慎選產品供應商

同樣的，Gartner 每年也會針對資通訊產品供應商的競爭力、市場影響力、發展前景、服務及營運能力等，提出調研報告，組織應據以評估該向誰引進產品，才能確保該項產品的品質，並有較長的使用年限以及受到供應商一定水準的維護服務。

#### 3.進行數位化轉型為智能化奠定基礎

從科技大廠及先進國家資訊科技應用發展的軌跡，可以觀察到他們的演進歷程，通常可以分為：1.自動化，2.數位化，3.智能化等，三個階段，目前我國電子化政府在自動化方面已經取得不錯的成果，現在必須用前瞻的眼光，關注未來潛在的資訊服務發展需求、找出收集數據的來源、佈署相應的平台及分析能量，才能從有用的數據中創造有價值的服務，並且為建立人工智慧的應用及提升其深度學習智能，儲存足夠的分析和訓練數據。

#### 4.開放 APP、API 建立資訊服務生態系統(Ecosystem)

要收集足夠有用的數據，除了部屬感應器(Sensor)外，利用 APP 可以從行動裝置收集到人們日常生活中，紀錄一些活動的時間序列、地理分布等有用數據，而開放 API 則可激發民間創意，發展延伸資訊服務，而延伸創新的 APP 可更進一步提供更多數據，進而發展出相關的產業生態體系，會更進一步促進數位化及智能化的發展。

#### 5.佈署邊緣運算滿足低延遲、高變動量之服務需求

雖然雲端運算架構強調可以彈性分配、佈署資訊資源，可以應付不同的工作負荷量(Work Load)，但經過幾年來的應用發現，當使用者越來越多，且服務需求量變化大，超過一定的數量後，由於資訊處理大部分集中到雲端，對於雲端平台及網路常會產生超載情形，服務水準會大幅下降，因此發展出微服務，讓只有單一功能的程式單元，彼此極度獨立，配合事件驅動架構平台，讓各程式單元間減少等候，直接進行各

項服務分解項目的處理，對於時效性要求更高的服務，則可考慮佈署邊緣運算，就地處理相關業務，免除回傳至雲端處理的傳輸及等候時間，可提供低延遲的服務。

## 6.注意區塊鏈技術的安全缺陷

區塊鏈的發展引起世界各國、各種產業的關注，尤其是金融業，我國則從央行到證交所、公民營銀行等，都積極投入研究，目前已有幾家民營商業銀行，基於前述區塊鏈的特性，建置區塊鏈的先導型應用系統，但近日來比特幣的受駭事件，顯示該項技術尚有安全漏洞，也顯示駭客功力進步神速，在未找出安全缺陷、提出有效防範措施確保安全性之前，應考量暫緩在金融及敏感業務方面的應用。

最後要提醒的是，網路世界充斥駭客及病毒，大家必須與駭客在技術方面共同成長，培養與時俱進的風險意識，及具備持續適應風險與信任的能力，才能在提供便捷、創新、優質的資訊服務時，確保資訊安全及客戶的信賴。

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16. Gavin Tay, Hype Cycle: Digital Workplace, Gartner Symposium/ITXPO, 30 Oct –2 Nov, Gold Coast, Australia
17. Gene Phifer, Magic Quadrant: Mobile App Development Platforms, Gartner Symposium/ITXPO, 30 Oct –2 Nov, Gold Coast, Australia
18. Brian Manusama, Using AI Conversational Platforms for Customer Experience —Better, Faster and Cheaper, Gartner Symposium/ITXPO, 30 Oct –2 Nov, Gold Coast, Australia
19. Dale Kutnick, Preparing the Board for Digital Business Initiatives, Gartner Symposium/ITXPO, 30 Oct –2 Nov, Gold Coast, Australia

陸、附錄(本次會議議程)。

<b>07:00 AM Monday, October 30</b>	
<b>Registration</b>	07:00 AM-06:00 PM Central Pavilion , Ground Floor
Registration will take place in the Central Pavilion at the Gold Coast Convention Centre. We encourage you to check that your gartner.com profile matches your priorities and industry. Your Industry will print on your badge and will help you connect with like-minded peers. Completing your profile will also streamline your ...	
<b>08:00 AM Monday, October 30</b>	
<b>Arrival Refreshments</b>	08:00 AM-10:00 AM Foyer B, Ground Floor
Start the day with coffee and pastries in Foyer B. Please email apac.registration@gartner.com if you have any dietary requirements.	
<b>Orientation</b>	08:00 AM-08:30 AM Gartner Zone, Ground Floor
<b>08:30 AM Monday, October 30</b>	
<b>Orientation</b>	08:30 AM-09:00 AM Gartner Zone, Ground Floor
<b>10:00 AM Monday, October 30</b>	
<b>Industry Opening Guest Keynote: The Neurogeneration: A New Era in Brain Augmentation &amp; Enhancement.</b>	10:00 AM-10:45 AM
Tan Le	Arena 1B, Ground Floor
The world we're about to step into will be unlike anything that has been seen before. This speed of change, as much as the specific changes it brings, will transform the ways we work, live and think. It is impossible to predict exactly what is coming but what we ...	
<b>11:00 AM Monday, October 30</b>	
<b>The Future of Digital Government: Platforms and Ecosystems</b>	11:00 AM-11:45 AM
Rick Holgate, Dean Lacheca	Arena 1B, Ground Floor
The rapid evolution of technology and the growing geopolitical and economic uncertainties make strategic decisions about digital government both challenging and potentially unsustainable. Using scenario planning techniques and exploring alternative but plausible futures helps identify the foundational components of a digital platform and understand the basic dynamics of partner ...	
<b>Digital Transformation in an Asset Intensive Company</b>	11:00 AM-11:45 AM
Kristian Steenstrup	Room 6, First Floor
The concepts of equipment and asset care are an interrelated weave of concepts including OT data, analytics and transactional EAM systems, often a part of ERP. But all of these parts must work together to achieve benefits for the organization. For asset intensive companies this must be mastered ...	
<b>11:45 AM Monday, October 30</b>	
<b>Banking, Financial Services and Insurance Industry Lunch Sponsored by F5 Networks</b>	11:45 AM-12:45 PM
	Hall 4 , ITxpo, Ground Floor
Enjoy a hot buffet lunch while networking with your industry peers. Please email apac.registration@gartner.com if you have any dietary requirements. Vegetarian options will be provided as standard on all buffets.	
<b>Government Industry Lunch Sponsored by DXC Australia Pty Ltd</b>	11:45 AM-12:45 PM
	Southern Terrace, Ground Floor
Enjoy a hot buffet lunch while networking with your industry peers. Please email apac.registration@gartner.com if you have any dietary requirements. Vegetarian options will be provided as standard on all buffets.	
<b>12:45 PM Monday, October 30</b>	
<b>Panel: Digital Leaders in Government</b>	12:45 PM-01:30 PM
Steve Mitchinson, Matt O'Mara	Arena 1B, Ground Floor
<b>Panel: Digital leaders in Financial Services</b>	12:45 PM-01:30 PM
Aniruddha Paul, Sami Yalavac	Arena 1A, Ground Floor
<b>01:45 PM Monday, October 30</b>	
<b>DXC Technology: Digital Citizenship and Smarter Agencies, Learnings From International and Local Achievements</b>	01:45 PM-02:15 PM
James Downie, Guy LeFever	Arena 1B, Ground Floor
Public Sector clients all share the same goals: to increase value, lower costs and improve the citizen experience. The Flemish and Belgium Governments are leaders in delivering better services for their citizens. Hear how they have achieved this from Guy LeFever, DXC's Global lead for Digital Industries and Analytics. ...	
<b>02:30 PM Monday, October 30</b>	
<b>To the Point: The Top Business and Technology Trends in Government</b>	02:30 PM-03:00 PM
Dean Lacheca	Arena 1B, Ground Floor
Government CIOs and IT leaders can demonstrate the value of strategic technology investments by linking them to the business drivers that will impact government over the next three to five years. This session presents the top business and technology trends that CIOs should factor into their digital government business strategy, ...	
<b>03:15 PM Monday, October 30</b>	
<b>To the Point: Win-Win Situation — Enhance the Customer Experience With Self-Funding Technology</b>	03:15 PM-03:45 PM
Miriam Burt	Room 6, First Floor
Retail customers are demanding a better experience — one that is frictionless, comprehensive and unified across the retailers channels. This session will explore	

use cases where retailers have improved their customer shopping experiences with capabilities, which resulted in a significant financial benefit that outweighed the cost of the investment.

#### CIO Story

03:15 PM-03:45 PM

Arena 1B, Ground Floor

Real people, genuine stories. These CIO leadership case studies come to life with real-world challenges and successes, each one presented by CIOs for CIOs. Honest and insightful, these stories address many of the same challenges you're facing.

#### To the Point: Financial Services 2030

03:15 PM-03:45 PM

Pete Redshaw

Arena 1A, Ground Floor

Organizations which conduct long-range planning consistently outperform those that do not. Significant questions with major long-term ramifications challenge today's FS institutions and industry. How and to what do we supply credit, what constitutes value, how is it created and the risk managed, and how do we understand and use technology? ...

#### 04:00 PM Monday, October 30

##### To the Point: Government Is Not a Business and Citizens are Not Your Customers

04:00 PM-04:30 PM

Rick Holgate

Arena 1B, Ground Floor

The misconceptions that government can be run like a business and citizens should be treated like customers have become ingrained in government thinking. In fact, neither are true and can lead to counterproductive behavior and approaches. How should you behave and deliver differently (and digitally) when you realize that your ...

##### To the Point: Unleash the Value of Information Through Analytics

04:00 PM-04:30 PM

Laura Craft

Room 5, First Floor

Health systems are increasingly accumulating data without achieving commensurate insight. During this session, we will present the global best practices of health systems who are using analytics to improve clinical outcomes, operational efficiency, and the management of population health.

##### To the Point: Data Wars — The Battle Over Your Equipment Moves to the Data Level

04:00 PM-04:30 PM

Kristian Steenstrup

Arena 1A, Ground Floor

As data is valued more and is a basis for profit from owners, operators and maintainers of equipment the battle lines are being drawn over who owns the data in your plant and equipment. This could prove to be the turning point in your data analytics project because you might ...

#### 04:45 PM Monday, October 30

##### Industry Closing Keynote: The Ten Principles Behind Great Customer Experiences

04:45 PM-05:30 PM

Matt Watkinson

Arena 1B, Ground Floor

#### 05:30 PM Monday, October 30

##### Industry Networking Reception: Government

05:30 PM-06:30 PM

Southern Terrace, Ground Floor

Network with colleagues and peers within Government and enjoy some refreshments and canapés on the Southern Terrace.

#### 07:00 AM Tuesday, October 31

##### Arrival Refreshments

07:00 AM-09:00 AM

Foyer B, Ground Floor

Start the day with coffee and pastries in Foyer B. Please email [apac.registration@gartner.com](mailto:apac.registration@gartner.com) if you have any dietary requirements.

##### Registration

07:00 AM-06:00 PM

Central Pavilion, Ground Floor

Registration will take place in the Central Pavilion at the Gold Coast Convention Centre. We encourage you to check that your [gartner.com](http://gartner.com) profile matches your priorities and industry. Your Industry will print on your badge and will help you connect with like-minded peers. Completing your profile will also streamline your ...

#### 08:00 AM Tuesday, October 31

##### Orientation

08:00 AM-08:30 AM

Gartner Zone, Ground Floor

#### 09:00 AM Tuesday, October 31

##### Gartner Analyst Opening Keynote: Creating Digital Value at Scale

09:00 AM-10:00 AM

Mchele C. Caminos, Leigh McMullen, Valentin T. Sribar

Arena 2, Ground Floor

Digital business is real, but how do you build momentum to scale and create value? How can you amplify the power of your people, your culture, and your technology platform to deliver breakthrough value? The Opening Keynote will provide practical advice and inspiration — no matter where you are on ...

#### 10:00 AM Tuesday, October 31

##### Gartner Zone: Selecting the Optimal Data for Big Datastore Architecture With Gartner's Technical Assessments

10:00 AM-10:15 AM

Drue Reeves

Gartner Zone, Ground Floor

In the big data arena, few choices are more important and impactful than the persistent data store. Come join us to understand the evaluation criteria to assess the different types and categories of data store using Gartner's Technical Assessments.

#### 10:05 AM Tuesday, October 31

##### Magic Quadrant: Enterprise Integration Platform as a Service

10:05 AM-10:25 AM

Eric Thoo

Stage 2, ITxpo, Ground Floor

Enterprise integration platform as a service (iPaaS) is a second generation, cloud-based application and data integration technology. Ease of use and fitness with digital business needs to connect on-premises, cloud-based and mobile applications and data are driving iPaaS fast adoption. In this session we discuss how the provider landscape is ...

##### Magic Quadrant: Mobile App Development Platforms

10:05 AM-10:25 AM

Gene Phifer

Stage 3, ITxpo, Ground Floor

Application leaders face an increasing array of digital channels to support, from apps to chatbots to VPAs. We evaluate the major MADP vendors that are used to accelerate and scale mobile app development, as well as deliver post-app experiences supporting digital business.



**10:30 AM Tuesday, October 31****影响您顾客管理策略的十大科技预测 (本场演讲的语言为中文普通话)**

10:30 AM-11:15 AM

Olive Huang

Gartner Zone, Ground Floor

2017年客户关系管理和客户体验管理的科技预测聚焦在行业的一些关键临界点。在未来几年中,运用数据分析技术和AI来提供更相关的客户支持互动是优秀顾客管理策略的核心。未来的销售技术将会侧重数据,并以算法和事件为驱动。大多数企业的应用领导者将被迫对顾客的隐私保护和信任建立维护给与更多的重视,并增加对客户体验的全面分析及混合集成能力的投资。这场演讲我们会阐述未来几年中将对您的顾客管理策略带来深远影响的十大科技预测。(本场演讲的语言为中文普通话)

**Beyond the Hype: Key Trends in Data Science**

10:30 AM-11:15 AM

Nick Ingelbrecht

Arena 1A, Ground Floor

This session will use the Hype Cycle for Data Science and other Gartner research to discuss the emerging trends in machine learning and data science. IT executives will gain a better understanding of what emerging technologies are real and what are just hype. An important session for attendees who are ...

**Develop a Pragmatic Security Vision and Strategy for Your Digital Platforms**

10:30 AM-11:15 AM

Rob McMillan

Arena 1B, Ground Floor

Digital platforms challenge the basic principles of information risk and security management as organizations reach out to work across their business ecosystems. Risk and security leaders must understand the associated risks and balance the imperative to protect the enterprise with the need to adopt innovative technology approaches. This presentation will ...

**The 2018 CIO Agenda: Mastering the new job of the CIO**

10:30 AM-11:15 AM

Andy Rowsell-Jones

Arena 2, Ground Floor

The "job" of CIO must grow and evolve as digital business spreads, and disruptive technologies, including smart machines and advanced analytics, reach critical mass. The complication is, for many CIOs, the path forward is unclear. What powerful practices should CIOs and IT leaders adopt to position themselves and their organizations ...

**11:30 AM Tuesday, October 31****Qlik: Three Game-Changing Trends in BI and Analytics**

11:30 AM-12:15 PM

Hjalmar Gislason

Arena 1B, Ground Floor

The BI and analytics space is going through a major transformation driven by increased data volumes, adaptation of cloud technologies and advances in machine learning. In his talk, Hjalmar will talk about how these three trends are shaping the industry and what the BI and analytics platform of tomorrow may ...

**MobileIron: Hiding in Plain Sight: The New Cloud Security Gap**

11:30 AM-12:15 PM

Matt Bennett

Central Room C, ITxpo, Ground Floor

Over 90% of organisations have a hole in their cloud security strategy. Employees are using mobile apps, not web, to consume cloud services like Office 365. Traditional security architectures are insufficient. This session outlines a new, practical model of enterprise trust necessary for the protection of cloud data.

**Dell EMC: How to Take Enterprise Apps to the Cloud Today**

11:30 AM-12:30 PM

Kevin Dattolico

Room 10, First Floor

We know digital agility is a must and we know the best way to achieve this agility is through a cloud-first strategy. Join Dell EMC and Virtustream at this roundtable dedicated to one critical conversation: how do you take your enterprise grade applications to the cloud today, quickly and efficiently, ...

**12:15 PM Tuesday, October 31****Networking Lunch**

12:15 PM-02:00 PM

ITxpo, Ground Floor

Join other attendees for lunch and take advantage of the opportunity to network and catch up on the day's activities so far.

**SnapLogic: Self-service Integration in the Age of Digital Transformation**

12:15 PM-12:35 PM

Rich Dill

Stage 3 , ITxpo, Ground Floor

The rise of the digital enterprise is reshaping the how we do business. Digital initiatives are expected to deliver growth opportunities and cost efficiencies, yet the technology and talent barriers to transformation remain substantial. Hear how leading enterprises are using integration as a key enabler of the digital enterprise. Learn how ...

**12:45 PM Tuesday, October 31****Hyland: Removing Roadblocks to Digital Transformation – 6 Steps To Success**

12:45 PM-01:05 PM

Terri Jones MA, JD, CDIA+, ECOMP

Stage 2 , ITxpo, Ground Floor

Join Terri Jones as she discusses digital transformation and six ways to drive efficiency and improve customer service. As CIOs, you face many possible investments for digital transformation, but choosing the best technology to meet your organisation's needs is difficult. This session covers critical questions to ask vendors, target areas ...

**Google Cloud: Democratising AI with Google Cloud AI**

12:45 PM-01:05 PM

Dan Aharon

Stage 4, ITxpo, Ground Floor

Machine Learning and AI have really helped push innovation at Google to the next level (Smart reply, Pixel camera, YouTube recommendations). In this session we will share how Google is democratising AI and how other companies can easily build their own AI technology.

**01:15 PM Tuesday, October 31****Salesforce: Meet Salesforce Einstein, AI-powered CRM for Everyone**

01:15 PM-01:35 PM

Andrew Price

Stage 3 , ITxpo, Ground Floor

Your customer data is growing rapidly. Come meet Einstein; AI for your CRM that learns from all that data to deliver predictions and recommendations based on your unique business processes. Pair that with automation and you have AI embedded where you work, everyone can now have a data scientist working ...

**01:30 PM Tuesday, October 31****Gartner Zone: How to Effectively Choose a Cloud Provider With Gartner's Evaluation Criteria**

01:30 PM-01:45 PM

Alan D Waite

Gartner Zone, Ground Floor

There are numerous choices for cloud infrastructure as a service (IaaS) providers today, and choosing the right service for an organization's technical and business needs is critical. This sessions describes how to use Gartner's Evaluation Criteria and In-Depth Assessments to choose the right provider for your organization.

**01:45 PM Tuesday, October 31****Bluewater Control: Managing a Mobile Workforce, Lessons from the Real World**

01:45 PM-02:00 PM

Paul Kennedy	Stage 1, ITxpo, Ground Floor
Operating from over 360 sites across Australia, Greencross including well known brand Petbarn, needed to manage the mobile workforce. Growth through acquisition meant that mobility was fragmented, costly and poorly controlled. Learn how Greencross brought mobile devices, services and applications under control, delivering a better experience for end ...	
<b>Business Analysts: Design Thinking - Why is this Important for a CIO?</b>	01:45 PM-02:00 PM
	Stage 2 , ITxpo, Ground Floor
Description: The CIO is the bridge between what is desired by the business, what is viable and what is technically feasible. How do you get all the moving expectations to align into a business solution? Design thinking with User Experience (UX) and Customer Experience (CX) is a creative approach to ...	
<b>02:00 PM Tuesday, October 31</b>	
<b>Six Steps to Change Leadership — The Escape Model</b>	02:00 PM-02:45 PM
Elise Olding	Room 5, First Floor
The digital era is characterized by uncertainty and constant change. Digital business demands transformation requires significant cultural and organizational change. Change methods of the past — "change management" — are not sufficient for success. What is needed is "change leadership." The Escape model provides six actionable steps to move to ...	
<b>The Pliable Network vs. the Pointless Pyramid — Why and How Organization Structures Will Transform in the Digital Age</b>	02:00 PM-02:45 PM
Brian Prentice	Arena 1B, Ground Floor
Yes ... jobs will disappear. But not where most people think. The most likely impact of the next wave of automation will hit administrative and middle management jobs as senior leadership and boards look to artificial intelligence and blockchain technology to blast away entrenched, costly and innovation-sapping bureaucracy. Traditional hierarchical ...	
<b>The CIO's Guide to the Top 10 Digital Disruptors in Asia/Pacific</b>	02:00 PM-02:45 PM
CK Lu	Arena 1A, Ground Floor
CIOs and IT leaders in global enterprises are familiar with the U.S.-based digital giants: Google, Facebook, Amazon and Apple, as there is a significant amount of research and media coverage on each of these companies. However, the Chinese and Asia/Pacific digital disruptors are normally shrouded with regard to how they ...	
<b>分析师问答专场: Gartner Symposium 开模式主题演讲中国问题专场 (本场问答的语言为中文普通话)</b>	02:00 PM-02:45 PM
Michael Kung	Gartner Zone, Ground Floor
分析师问答专场互动性很强, 您可以向分析师提问, 分析师会根据问题解答。在这个问答专场您可以和分析师讨论关于Gartner Symposium开模式主题演讲的相关问题。例如, 常见问题包括: 开模式主题演讲所提到的某个趋势跟中国的关联, 等。请注意: 参会者应准备好问题, 本场问答的语言为中文普通话, 请事先注册	
<b>The Top 10 Strategic Technology Trends for 2018</b>	02:00 PM-02:45 PM
Brian Burke	Arena 2, Ground Floor
Strategic technology trends have significant disruptive potential over the next five years. The top trends for 2018 underpin the digital platform and set the stage for business innovation. Companies must examine their business impacts and adjust business models and operations appropriately or risk losing competitive advantage to those who do. ...	
<b>03:00 PM Tuesday, October 31</b>	
<b>Amazon Web Services: It's Always Day 1 – Amazon's Tips for Sustained Innovation</b>	03:00 PM-03:45 PM
Dorothy Nicholls	Arena 1B, Ground Floor
Companies that don't innovate risk becoming marginalized, and technology and business leaders are often expected to accelerate the speed of innovation within their companies. The most powerful intangible force in driving business innovation is corporate culture. What are the leadership styles that promote an innovative culture? This session will showcase ...	
<b>Google Cloud: Which Enterprise Cloud Provider to Pick? 5 Things to Know</b>	03:00 PM-03:45 PM
Oyind Roti	Arena 2, Ground Floor
Being data-driven is core to how Google operates and it's increasingly important to any business. As Google grew, we needed ways to tie together engineering and product teams around the world and make them more productive. Join us to hear about all these aspects as well as how you can ...	
<b>Qlik: Providing Insight with Data Analytics for Improved Business Performance</b>	03:00 PM-04:00 PM
Dr Nicky Antonius, Scott Johnston	Room 12, First Floor
Come listen to 2 customer case studies from the Federal Department of Employment and the Public Service Commission of NSW. Exposing data in an intuitive format to internal users, external stakeholders and service providers, and in some cases the public, has showcased program performance and highlighted areas for improvement. Significant ...	
<b>03:45 PM Tuesday, October 31</b>	
<b>Refreshment Break</b>	03:45 PM-04:15 PM
	ITxpo, Ground Floor
Network with peers, colleagues and sponsors over some light refreshments & barista coffee in ITxpo. There is barista coffee service available from the all-day café as well as either side of ITxpo. You can also enjoy a freshly squeezed Juice from the Juice Bar located close to the Analyst one-on ...	
<b>The CIO as Cultural Champion, Digital Disruptor and Enterprise Leader</b>	03:45 PM-04:15 PM
Poh-Ling Lee	Gartner Zone, Ground Floor
Master the critical executive level competencies for business, leadership and people to build high-performance teams and improve organizational health that will accelerate your success and help you win.	
<b>03:50 PM Tuesday, October 31</b>	
<b>Splunk: Digital Transformation and the Art of the Possible with Splunk</b>	03:50 PM-04:10 PM
Neil Gow	Stage 2 , ITxpo, Ground Floor
Digital transformation is driving fundamental change in IT, demanding a new operating model for people, activities and services. This new operating model requires teams to collaborate across functions, deliver and manage complete services. The role of machine data is a fundamental piece of the fabric for this digital transformation journey. ...	
<b>04:15 PM Tuesday, October 31</b>	
<b>Digital Platform Roadmap</b>	04:15 PM-05:00 PM
Brian Burke	Room 6, First Floor
Last year Gartner introduced the digital platform. This session continues the discussion by helping CIOs decide how to structure their digital platform for the goals of	

the enterprise. Some enterprises will seek to supercharge their existing business and products, while others will pursue net-new products and business models. The digital ...	
<b>Ask the Analyst: What Every CIO Should Know About Integration Platform as a Service (iPaaS)</b>	04:15 PM-05:00 PM
Eric Thoo	Room 1, First Floor
Digital businesses work in a hyper-connected world where cloud services, enterprise applications, data structures, and even "things" must seamlessly operate together to support business goals. Join this analyst-moderated discussion on how to leverage iPaaS, a cloud-based integration technology and a market with phenomenal growth over the last three years for ...	
<b>CIO必须了解的亚太区十大数字颠覆者(本场演讲的语言为中文普通话)</b>	04:15 PM-05:00 PM
CK Lu	Gartner Zone, Ground Floor
全球的CIO和IT领导者大多熟悉美国为主体的数字巨头: Google, Facebook, Amazon和Apple, 因为这些公司长期被媒体关注并有相当多相关的研究. 但是, 中国和亚太区的数字颠覆者常被蒙上一层神秘的面纱, 令外界无法深入了解这些公司在数字商业的颠覆与创新. (本场演讲的语言为中文普通话)	
<b>CIO Futures: The IT Organization in 2030</b>	04:15 PM-05:00 PM
Jenny Beresford	Central Room C, ITxpo, Ground Floor
The IT domain in 2030 will evolve out of today's agile practices and professional services models. CIOs will organize a fluid arrangement of teams charged with turning ideas into reality.	
<b>05:00 PM Tuesday, October 31</b>	
<b>ITxpo Evening Reception</b>	05:00 PM-06:30 PM
	ITxpo, Ground Floor
Network, find solutions for upcoming projects and learn about the latest technologies by attending this lively reception that facilitates a meaningful exchange of ideas — all in an environment enhanced by good food and drink. Participate in special entertainment provided by solution providers and continue the conversation with other attendees over ...	
<b>08:00 AM Wednesday, November 01</b>	
<b>Arrival Refreshments</b>	08:00 AM-09:00 AM
	Foyer B, Ground Floor
Start the day with coffee and pastries in Foyer B. Please email <a href="mailto:apac.registration@gartner.com">apac.registration@gartner.com</a> if you have any dietary requirements.	
<b>Registration</b>	08:00 AM-07:00 PM
	Central Pavilion, Ground Floor
Registration will take place in the Central Pavilion at the Gold Coast Convention Centre. Badges must be worn at all times during the event. If you lose your badge, please return to Registration with your photo ID to pick up a reprint of your badge. Don't forget, you'll need photo ...	
<b>08:45 AM Wednesday, November 01</b>	
<b>智能机器、人工智能和认知计算: 什么能做和什么不能做?(本场演讲的语言为中文普通话)</b>	08:45 AM-09:30 AM
CK Lu	Gartner Zone, Ground Floor
这场演讲将回答以下5个重要问题: 如何思考这些议题并认清虚构和事实间的差异? 哪些是成熟的技术? 它们将对平台范式有何冲击? 有何重要的应用? IT领导者们需要关注什么议题? (本场演讲的语言为中文普通话)	
<b>09:00 AM Wednesday, November 01</b>	
<b>How to Optimize Your Data Management Investment Through People, Process, and Technology Initiatives</b>	09:00 AM-09:45 AM
Mark A. Beyer	Arena 1A, Ground Floor
Opportunities for optimizing your data management investment span multiple disciplines: data integration, data quality, DBMS, data warehousing, and metadata. While the specific opportunities are different for each discipline, common themes align to people, practice, and technology initiatives, as well as new deployment models like cloud. We explore ...	
<b>If "Enterprise Blockchain" Is the Answer, What Exactly Is the Question?</b>	09:00 AM-09:45 AM
Rajesh Kandaswamy	Room 5, First Floor
Most enterprise blockchain projects, even in late 2017, are misaligned with the decentralized nature of blockchain technology. The result is plenty of dead-end proof-of-concept projects. Fewer than 5% of POCs move to production, and this is a good thing, because if they were deployed, the outcome would be disappointment. This ...	
<b>Practice Makes Perfect - Five Situational Leadership Types</b>	09:00 AM-09:45 AM
Suzanne Adnams	Central Room C, ITxpo, Ground Floor
CIOs are encountering growing leadership expectations for responding to digital business demands, but often have no practical experience in how to lead teams. IT teams are becoming more diverse both in membership — including technical and business members — and in delivery goals. The one-size-fits-all leadership approach does not take ...	
<b>09:45 AM Wednesday, November 01</b>	
<b>Gartner Zone: How to Implement Data Analytics Projects Successfully With Gartner's Solution Paths</b>	09:45 AM-10:00 AM
Drue Reeves	Gartner Zone, Ground Floor
Data and analytics are at the center of every competitive business. Come join us to learn a step-by-step methodology to envision, architect and implement a comprehensive data management and analytics strategy.	
<b>10:15 AM Wednesday, November 01</b>	
<b>Building an Enterprise Cloud Strategy That Works</b>	10:15 AM-11:00 AM
Evan Zeng	Arena 1A, Ground Floor
While the question of "which applications should be in the cloud?" is an important one, it must be posed as part of a holistic and consistent cloud strategy, not a never-ending series of custom-made projects or one-offs. This session will provide actionable advice on creating a comprehensive, enterprise cloud strategy, ...	
<b>How to Use Infrastructure as a Service to Optimize Costs</b>	10:15 AM-11:00 AM
David Groombridge	Central Room C, ITxpo, Ground Floor
Many organizations expect megascale IaaS public cloud to provide a rapid route to optimizing costs. However, many fail to achieve savings due to lack of planning and management or, worse, save IT costs at the expense of business value. This session will explain how to: • Build a clear strategy to ...	
<b>Putting Data and Analytics at the Heart of Your Digital Platform</b>	10:15 AM-11:00 AM

Andrew White	Hall 4 , ITxpo, Ground Floor
This new research highlights the key levers CIO's and digital business leaders need to pull and invest in across data, analytics, process, and apps in order to exploit digital moments. This spans people, process, data and technology and provides an atlas for your digital platform. • How do data and analytics ...	
<b>11:15 AM Wednesday, November 01</b>	
<b>IBM: Driving Business Reinvention in the Disruptive Era. Do You Have What it Takes?</b>	11:15 AM-12:00 PM
	Arena 2, Ground Floor
Innovative IT Leaders are reshaping businesses with cloud and AI technologies, to emerge as the disruptive force that drives business reinvention. How are these leaders dealing with the challenges of the digital era? What or who are they using to their advantage? And what does all this mean for their ...	
<b>12:00 PM Wednesday, November 01</b>	
<b>Networking Lunch</b>	12:00 PM-01:45 PM
	ITxpo, Ground Floor
Enjoy your lunch on ITxpo while networking with peers, colleagues and sponsors. ITxpo has got your lunch covered. Choose from hot buffets throughout ITxpo, experience daily live chef stations or pop by the all-day café for a lighter snack option. Please email apac.registration@gartner.com if you have any dietary requirements. ...	
<b>12:30 PM Wednesday, November 01</b>	
<b>Amazon Web Services: Customer Cloud Adoption Challenges and How to Best Mitigate Them</b>	12:30 PM-12:50 PM
Liam Caskie	Stage 3 , ITxpo, Ground Floor
Using the AWS Cloud Adoption Framework (CAF) across ANZ customers we have identified the top 5 cloud adoption challenges. In this session we will dive deep into these challenges and provide guidance on the best mitigation techniques to accelerate your cloud journey.	
<b>Dynatrace: How AI-Powered Automation is Accelerating the Delivery of Unrivalled Digital Experiences</b>	12:30 PM-12:50 PM
Rafi Katanasho	Stage 4, ITxpo, Ground Floor
It's no secret that digital transformation is impacting every department and function of a business, to the extent that it is no longer the exclusive domain of CIOs and IT departments. As cloud migration, AI, IoT, Big Data and microservices gather, or continue apace, automated digital performance management strategies become ...	
<b>01:00 PM Wednesday, November 01</b>	
<b>IBM: Enabling IT-as-a-Service: A CIOs Guide</b>	01:00 PM-01:20 PM
Amelia Forbes	Stage 4, ITxpo, Ground Floor
At an increasing rate, IT organizations are considering deploying a multi-cloud / hybrid IT strategy, as a result there is a need to understand the impact on the current operating model domains; IT & business processes, technologies, security, IT operations, finance and governance. Understand where and how IT organizations can ...	
<b>01:30 PM Wednesday, November 01</b>	
<b>Venafi: Machine Identity Protection</b>	01:30 PM-01:45 PM
Terrie Anderson	Stage 3 , ITxpo, Ground Floor
There are two actors on your network - humans and machines. Organizations spend 7 billion dollars annually on identity and access management. The vast majority of this is spent on protecting user names and passwords; almost none of it goes towards protecting machine identities, which are essential to securing our ...	
<b>Gartner Zone: Successfully Manage Public IaaS and PaaS Services With Gartner's Technical Professionals Research</b>	01:30 PM-01:45 PM
Alan D Waite	Gartner Zone, Ground Floor
Increased usage of cloud services produces new challenges for organizations that have to manage public IaaS and PaaS. Come join us to learn how to develop a cloud management strategy and choose among the cloud provider's native tools, third-party software, DIY and managed services, leveraging Gartner's Technical Professionals Research.	
<b>01:45 PM Wednesday, November 01</b>	
<b>企业数字平台型业务需要拓展双模IT的新赋能(本场演讲的语言为中文普通话) Digital Platform Business Needs New Capabilities Beyond Bimodal IT (Session Delivered in Chinese Mandarin)</b>	01:45 PM-02:30 PM
Evan Zeng	Gartner Zone, Ground Floor
由内往外, 由外往内和由外往外是平台型企业的三种数字化业务特征。当企业开始开放核心资产和能力对外提供服务时候, 企业的IT将会迎来远多于敏捷性的新需求(例如多租户的需求)。在这场演讲中, 我们将一起浏览企业数字平台型业务模式对企业IT有怎样的新需求, 使得企业首席信息官更好地了解如何拓展双模方法论去满足平台型业务的需求。Inside-out, outside-in and outside-out are the three digital business models on a platform company. As enterprise IT starts to provide external services by offering key assets and capabilities, their infrastructure will have new demands much beyond agility (multitenancy, for example). In this session, we will explore what those new business ...	
<b>02:45 PM Wednesday, November 01</b>	
<b>Google Cloud: Navigating How to Secure Your Data in the Cloud</b>	02:45 PM-03:45 PM
Angelo Joseph	Room 12, First Floor
This facilitated session will guide you through Google's state of the art design principles as a Cloud Service Provider covering the following areas: Protection - How does Google protect your data? Control - What measures does Google provide to customers to apply security at various levels and types? Transparency - How does Google ...	
<b>03:30 PM Wednesday, November 01</b>	
<b>Refreshment Break</b>	03:30 PM-04:00 PM
	ITxpo, Ground Floor
Network with peers, colleagues and sponsors over some light refreshments & barista coffee in ITxpo. There is barista coffee service available from the all-day café as well as either side of ITxpo. You can also enjoy a freshly squeezed Juice from the Juice Bar located close to the Analyst one-on ...	
<b>Hype Cycle: Cloud Security</b>	03:30 PM-03:50 PM
Craig Lawson	Stage 1, ITxpo, Ground Floor
This Hype Cycle encompasses technologies and standards that improve the security, governance and reliability of private and public cloud computing.	
<b>04:00 PM Wednesday, November 01</b>	
<b>建立一个可执行的企业级云战略(本场的语言是中文普通话)</b>	04:00 PM-04:45 PM

Evan Zeng	Gartner Zone, Ground Floor
虽然"哪个应用应该放在云中"是一个重要的问题,但是企业回答此问题之前必须先有一个全面而且一致的云战略,而不是每次遇到类似问题时候再定制一个不同的答案。这场演讲将会为企业建立一个全面而且可执行的云战略提供建议,同时还会回答问题"哪个应用应该放在云中"。	
<b>From APIs to Digital Platforms: API Economy Lessons for Building an Ecosystem</b>	04:00 PM-04:45 PM
Deacon D.K Wan	Arena 1B, Ground Floor
Any digital strategy needs to be enabled by an API rich platform. Having an active ecosystem over the platform will give you solutions you would never have time or budget for internally. However ecosystems must be nurtured and managed. How are ecosystems built in the API Economy? What makes them ...	
<b>Methods for Monetizing Your (and Others') Information Assets</b>	04:00 PM-04:45 PM
Douglas Laney	Room 6, First Floor
Monetizing your data is about much more than selling or licensing it. It's about generating measurable economic benefits from it. This session explores: why you should monetize your data, how to organize and plan for monetizing your data, and what are some inspirational examples of organizations monetizing available information assets. ...	
<b>New Business and Economic Models as an Antidote to Digital Disruption</b>	04:00 PM-04:45 PM
Dale Kutnick	Room 7, First Floor
The pace and breadth of digital disruption continues to accelerate. While many enterprises are exploiting technologies to drive incremental changes, without transforming their business and economic models, their organizations will still be exposed to rapidly shifting market forces and competitors that could leave them vulnerable.	
<b>08:00 AM Thursday, November 02</b>	
<b>Arrival Refreshments</b>	08:00 AM-09:00 AM
	Foyer B, Ground Floor
Start the day with coffee and pastries in Foyer B. Please email apac.registration@gartner.com if you have any dietary requirements.	
<b>Registration</b>	08:00 AM-03:30 PM
	Central Pavilion , Ground Floor
Registration will take place in the Central Pavilion at the Gold Coast Convention Centre. Badges must be worn at all times during the event. If you lose your badge, please return to Registration with your photo ID to pick up a reprint of your badge. Don't forget, you'll need photo ...	
<b>09:00 AM Thursday, November 02</b>	
<b>Mastermind Keynote: Building the Quantum Future with Michael J. Biercuk</b>	09:00 AM-09:45 AM
Professor Michael J. Biercuk	Arena 2, Ground Floor
The software platforms we use every day operate on hardware that takes decades of research to develop. But what if we could build that tech faster and smarter? Michael J. Biercuk is a technologist and physicist working at the coalface of quantum science, profound transforming that way that we build ...	
<b>10:00 AM Thursday, November 02</b>	
<b>BlackBerry: Working Outside the Fence, Security in a Mobile World</b>	10:00 AM-10:45 AM
Paul Crighton, Jamie Lindsay	Room 5, First Floor
Where we used to secure a perimeter, this no longer meets business requirements when employees need to access internal systems remotely and need to share sensitive information with clients, partners and contractors. During this session, we will explore the challenges faced by IT departments to secure their apps, process and ...	
<b>Equinix: Scale and Interconnect for Success in the Digital Economy</b>	10:00 AM-10:30 AM
Ravi Ravishankar, Joe Weinman	Room 6, First Floor
Digital is transforming all industries and IT needs to be re-architected to enable new digital business models. Interconnection scaled the Internet, web, and thriving digital ecosystems like financial securities trading. Now Interconnection is enabling firms to scale digital business platforms and ecosystems globally. Learn critical insights from the Global Interconnection ...	
<b>10:45 AM Thursday, November 02</b>	
<b>Partner with Gartner on Technology and Information Innovation to Accelerate Your Contribution to Sustainable Growth</b>	10:45 AM-11:15 AM
Poh-Ling Lee	Gartner Zone, Ground Floor
Partner with Gartner Executive Programs and discover the tips and techniques that CIOs have taken to lead the digital dialogue and build innovation capability by leveraging strategic partnerships.	
<b>Refreshment Break</b>	10:45 AM-11:15 AM
	ITxpo, Ground Floor
Network with peers, colleagues and sponsors over some light refreshments & barista coffee in ITxpo. There is barista coffee service available from the all-day café as well as either side of ITxpo. You can also enjoy a freshly squeezed Juice from the Juice Bar located close to the Analyst one-on ...	
<b>Capsifi: Capability Uplifts - The Key to Intelligent Business Transformation</b>	10:45 AM-11:05 AM
Terry Roach	Stage 1, ITxpo, Ground Floor
The principle challenge facing any digital transformation initiative is to clearly articulate the current and future state business model and the roadmap for getting there. In particular, how to identify, track and measure Business Capability uplifts across a portfolio of delivery projects. Drawing on a variety of real-world cases, this presentation ...	
<b>IBM: Enterprise AI: Is Your Infrastructure Ready?</b>	10:45 AM-11:05 AM
Sebastian Thomas	Stage 4, ITxpo, Ground Floor
The latest advances in AI can help enterprises unleash insight in unprecedented ways, but AI often requires a new approach to infrastructure. This session will explore how systems innovation can put data to work for deeper insights and better business outcomes	
<b>11:15 AM Thursday, November 02</b>	
<b>Best Practices for I&amp;O Cost Optimization</b>	11:15 AM-12:00 PM
Michele C. Caminos	Hall 4 , ITxpo, Ground Floor
Badly thought out cost-cutting strategies do not work for enterprises that are moving into the digital economy and must continually optimize costs. This presentation will provide the structure needed for a cost-optimization program and will provide deeper dive best practices for optimizing your data center and cloud spend and improving ...	

<b>Everything You Need to Know About Data Ownership, Rights and Sovereignty</b>	11:15 AM-12:00 PM
Douglas Laney	Arena 2, Ground Floor
You may think you own your own data, but it's likely the courts would not entirely agree. Nor do insurance organizations, governments or the accounting profession. The stakes are high and the risks may be higher for your organization if you don't appreciate the nuances of information property rights.	
<b>Top Emerging Business and Societal Trends You Need to Follow Today</b>	11:15 AM-12:00 PM
Don Scheibenreif	Room 5, First Floor
Gartner presents its view of the top emerging trends that impact not only technology, but business itself. Built from the collective insight of over 1,000 Gartner analysts, this session will provide insight into technology-driven societal and business trends, what it means for your enterprise, and what you can do next ...	
<b>12:15 PM Thursday, November 02</b>	
<b>Calculating the Total Cost of Digital Strategies</b>	12:15 PM-01:00 PM
Ken McGee	Central Room C, ITxpo, Ground Floor
After years of describing the particulars of various types of digital strategies, this research report will answer one vital question: How much will it cost to build and sustain a digital strategy?	
<b>Reshape Integration for Bringing Order to Data and Application Chaos in Digital</b>	12:15 PM-01:00 PM
Eric Thoo	Arena 2, Ground Floor
Integration challenges significantly intensify as digital businesses operate at the speed of business moments. The proliferation of information and connected systems compels enterprises to expand and unify their data and application integration strategy to handle all hybrid patterns, with a mix of latencies, blend physical and virtualized data delivery, and ...	
<b>Using AI Conversational Platforms for Customer Experience — Better, Faster and Cheaper</b>	12:15 PM-01:00 PM
Brian Manusama	Hall 4 , ITxpo, Ground Floor
The cost to engage with customers effectively is being challenged by the growth in use of message-based communications by customers and their changing preferences. Automating customer engagements is an intrinsic need in any customer-facing organization but success has been limited. The emergence of AI conversational platforms is changing the landscape. ...	
<b>01:00 PM Thursday, November 02</b>	
<b>Networking Lunch</b>	01:00 PM-02:00 PM
	ITxpo, Ground Floor
Enjoy your lunch on ITxpo while networking with peers, colleagues and sponsors. ITxpo has got your lunch covered. Choose from hot buffets throughout ITxpo, experience daily live chef stations or pop by the all-day café for a lighter snack option. Please email <a href="mailto:apac.registration@gartner.com">apac.registration@gartner.com</a> if you have any dietary requirements. ...	
<b>01:30 PM Thursday, November 02</b>	
<b>Magic Quadrant for Intrusion Detection and Prevention Systems</b>	01:30 PM-01:50 PM
Craig Lawson	Stage 3 , ITxpo, Ground Floor
This session will describe the latest Gartner Magic Quadrant on intrusion detection and prevention systems. As a long and staple network security technology, this session will describe the current market, valuable use cases for IDPS, and an overview of the vendor landscape.	
<b>02:00 PM Thursday, November 02</b>	
<b>Doing the Simple Things Well Means the Hard Things Are Easier in Information Security</b>	02:00 PM-02:45 PM
Craig Lawson	Hall 4 , ITxpo, Ground Floor
This presentation will take various datasets as well as insights from thousands of Gartner inquiries to distill them into a simple message of what the simple and efficient things are in cybersecurity. Gartner consistently sees that breaches are more often than not caused from a failure in doing the basics. ...	
<b>03:00 PM Thursday, November 02</b>	
<b>Closing Keynote: Signature — Willful Disruption and Seven Disruptions You Might Not See Coming</b>	03:00 PM-03:30 PM
Jenny Beresford, Bard Papegaaij, Andy Rowsell-Jones	Arena 2, Ground Floor
With so much focus on innovation and disruption as strategies to leverage in the move to digital business, much attention gets placed on high-profile companies who have succeeded in this manner. While there is much to be gleaned from possible emulation of the company's efforts, many organizations rightly recognize that ...	