

آثار الصناعات الدقيقة

المرتبطة بالتقنيات الناشئة على التنمية المستدامة



إعداد وتقديم: محمد كمال
إدارة المعلومات الصناعية

ورشة عمل حول "دور التقنيات الناشئة في خدمة أهداف التنمية المستدامة" – عبر تقنية الاتصال عن بعد – 8 ديسمبر 2021

المداخل

آثار الصناعات الدقيقة

المرتبطة بالتقنيات الناشئة على التنمية المستدامة

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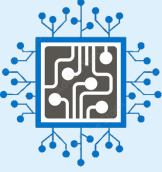


تعريفات

التصنيع الدقيق: مصطلح يستخدم لوصف عمليات تصنيع هياكل مصغرة، من أحجام ميكرومتر أصغر حجماً.

التقنية ساهمت في مجال التصغير لمختلف الأجهزة في العديد من مجالات العلوم والهندسة مثل: الفيزياء والكيمياء وعلم المواد، علم الحاسوب، والهندسة فائقة الدقة وعمليات التصنيع، وتصميم المعدات.





تعريفات

التقنيات الناشئة: تشمل التقنيات الناشئة مجموعة متنوعة

من التقنيات مثل التقنيات التعليمية وتكنولوجيا المعلومات
وتكنولوجيا النانو والتقانة الحيوية والعلوم الإدراكية والتقنية
النفسية وعلوم الروبوتات والذكاء الاصطناعي.

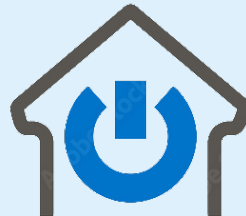
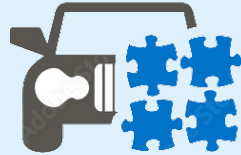
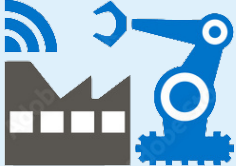


تعريفات

أهداف التنمية المستدامة

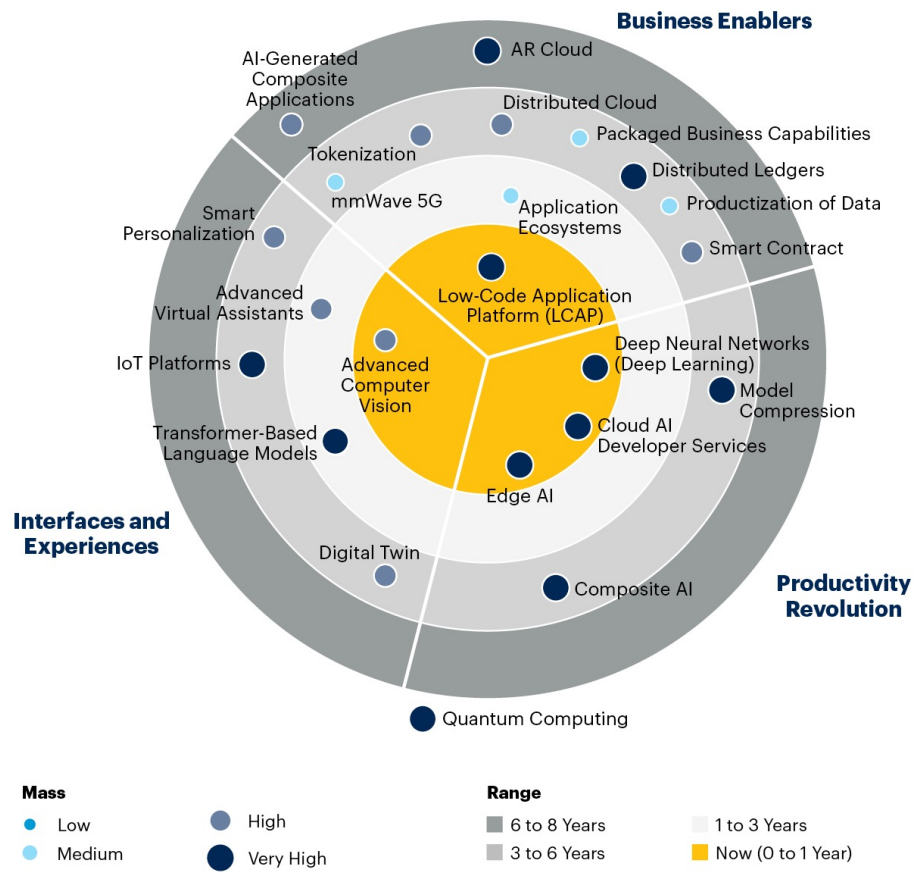


أهم توجهات التقنيات الناشئة



أهم توجهات

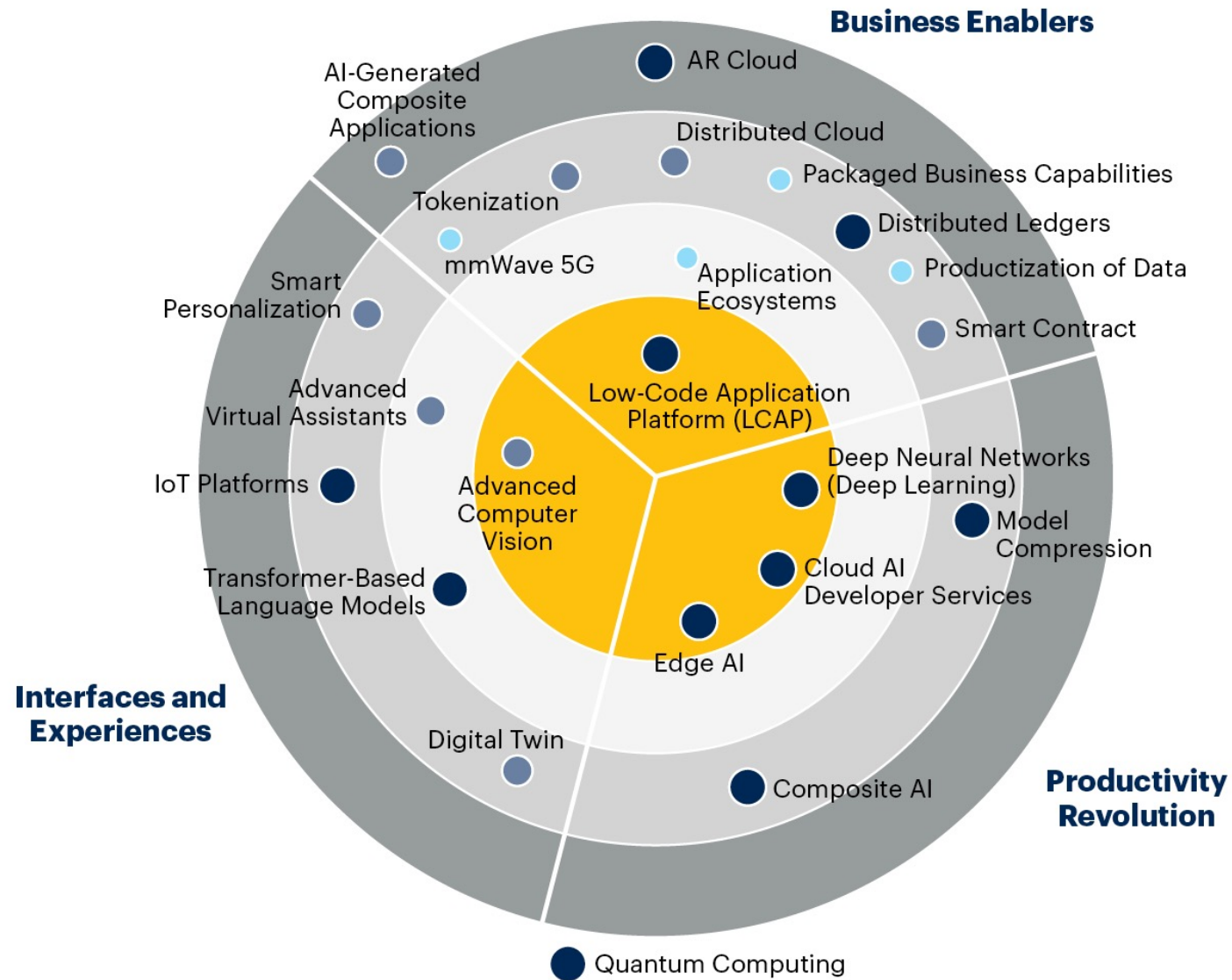
Emerging Technologies and Trends Impact Radar



gartner.com/SmarterWithGartner

Source: Gartner
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Mass

Low

Medium

High

Very High

Range

6 to 8 Years

3 to 6 Years

1 to 3 Years

Now (0 to 1 Year)

آثار الصناعات الدقيقة على التنمية المستدامة



Top Artificial Intelligence (AI) Use Cases

Predictive Sales/Lead Scoring

Predictive sales prioritize prospective customers by filtering out unqualified leads. Many sales and marketing platforms now offer scoring modules that forecast results and develop campaigns intended to generate higher quality leads.



CRM/Service Delivery Optimization

Customer relationship management (CRM) and service delivery optimization systems monitor and analyze customer patterns to increase profitability. Sales reps use this information to better understand their customers and identify opportunities to cross-sell and upsell.



Chatbots/Digital Assistants

Chatbots and digital assistants are applications used to conduct online conversations via text or text-to-speech, in lieu of live agents. This allows companies to scale, leveraging existing resources, while delivering a "human-like" customer experience.



Cybersecurity Threat Detection

Companies can enhance their security against cyberattacks when they leverage AI-powered cybersecurity platforms. These threat detection platforms utilize machine learning to analyze data and expose potential cyber threats.



Marketing Automation

AI-powered tools harmonize data from various sources and automatically compile predictive analytics about customers to gain insight into preferences and, in turn, create marketing campaigns to capture them as qualified leads.



Top Internet of Things (IoT) Use Cases

Asset Tracking

Asset tracking streamlines labor-intensive and error-prone equipment and inventory management by monitoring asset usage in real-time throughout a location, such as a building, warehouse, yard or campus.



Industrial Monitoring

Industrial monitoring improves performance, productivity and efficiency of industrial processes in manufacturing, mining, oil and gas, utilities and other industries by monitoring the condition of assets, predicting maintenance and ensuring quality.



Smart Badges

By issuing sensor-based badges to employees and guests, organizations can take a simple yet sophisticated approach to identifying, locating, and providing secure access to personnel in their facilities.



Fleet Management

Fleet management allows fleet operators to automate processes by providing visibility in real time to monitor vehicle maintenance, usage, and driver performance.



Smart Buildings

Smart buildings enable organizations to monitor building characteristics to optimize the environment and operations, such as automating and controlling security or HVAC systems.



Top Artificial Intelligence (AI) Use Cases

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الصناعة والابتكار
والهياكل
الأساسية

9



مدن ومجتمعات
محلية مستدامة

11



الاستهلاك
والإنتاج
المسؤولان

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Top Internet of Things (IoT) Use Cases

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7
طاقة نظيفة
وبأسعار معقولة



9
الصناعة والابتكار
والهياكل
الأساسية



II
مدن ومجتمعات
محلية مستدامة



Learn more at connect.CompTIA.org.



CompTIA
Emerging Technology Community

We distilled seven cross-industry and three industry-specific trends based on prioritized technologies...

Technology trends and underlying technologies

Industry-agnostic trends



1 Next-level process automation...

Industrial IoT¹
Robots/cobots²/RPA³



... and process virtualization

Digital twins
3-D/4-D printing



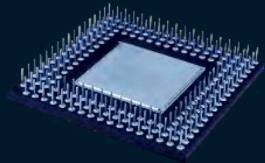
2 Future of connectivity

5G and IoT connectivity



3 Distributed infrastructure

Cloud and edge computing



4 Next-generation computing

Quantum computing
Neuromorphic chips (ASICs⁴)



5 Applied AI

Computer vision, natural-language processing, and speech technology



6 Future of programming

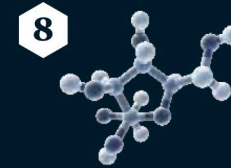
Software 2.0



7 Trust architecture

Zero-trust security
Blockchain

Industry-specific trends



8 Bio Revolution

Biomolecules/"-omics"/
biosystems
Biomachines/biocomputing/augmentation



9 Next-generation materials

Nanomaterials, graphene and 2-D materials, molybdenum disulfide nanoparticles



10 Future of clean technologies

Nuclear fusion
Smart distribution/metering
Battery/battery storage
Carbon-neutral energy generation

1. Internet of things. 2. Collaborative robots. 3. Robotic process automation. 4. Application-specific integrated circuits.

— Over —
2.7 million
INDUSTRIAL ROBOTS
used by businesses
worldwide in **2020**



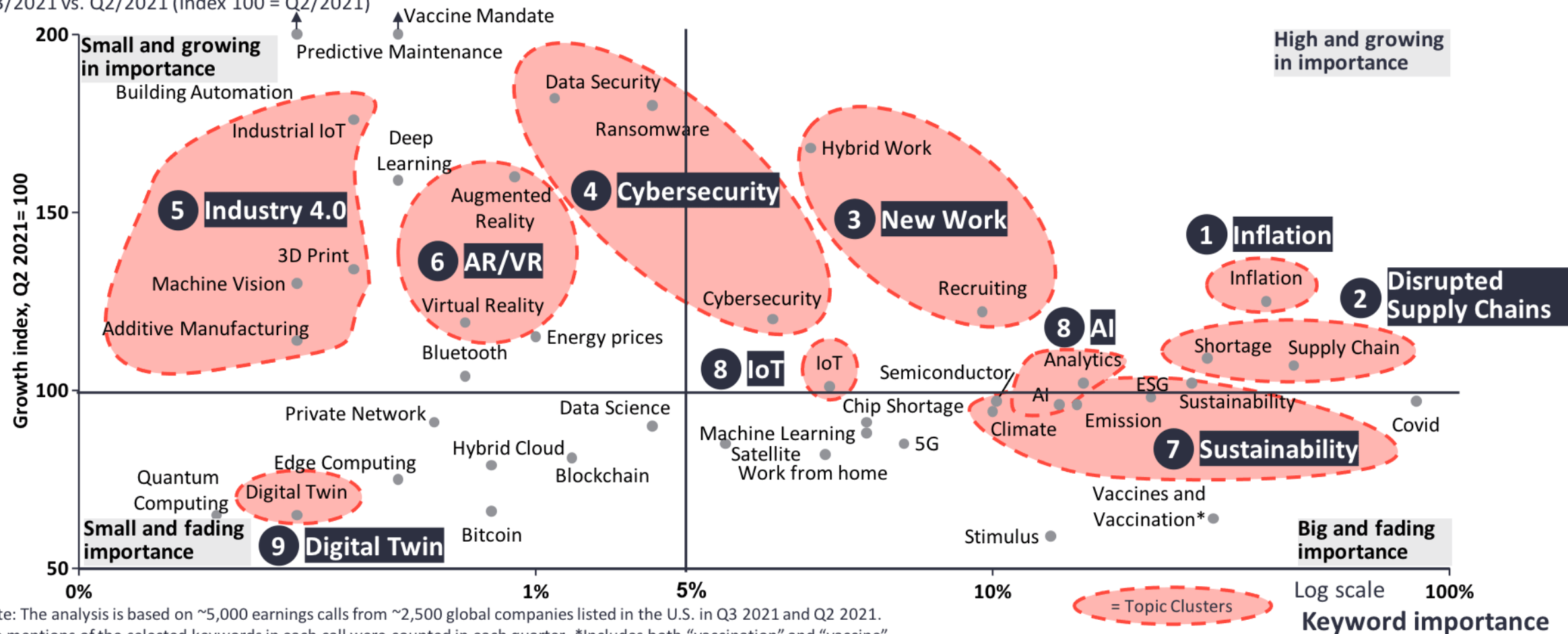
70%
of manufacturers
will be using
**DIGITAL
TWINS**
by **2022**



What CEOs talked about in Q3/2021 (vs. Q2/2021)

Keyword growth

Q3/2021 vs. Q2/2021 (Index 100 = Q2/2021)

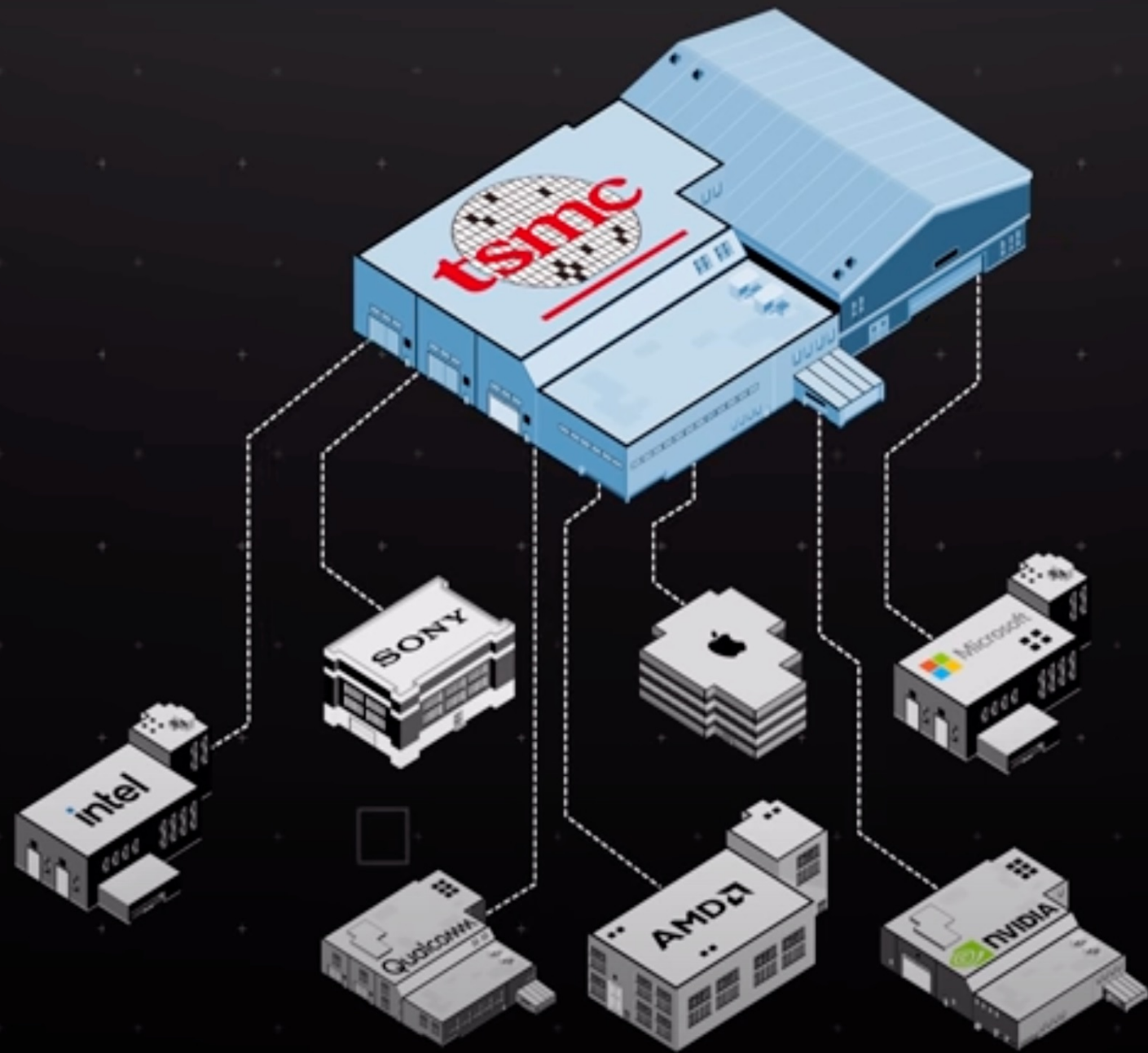


Note: The analysis is based on ~5,000 earnings calls from ~2,500 global companies listed in the U.S. in Q3 2021 and Q2 2021.

The mentions of the selected keywords in each call were counted in each quarter. *Includes both "vaccination" and "vaccine"

Source: IoT Analytics Research 2021

(Share of companies that mentioned the keyword in Q3 2021 at least once)









Toyota to cut global output 15% in November

نماذج ومبادرات عربية





Operation 300bn

تفاصيل الهوية الصناعية الموحدة للإمارات
خطة الـ 10 سنوات

133
مليار درهم في 2020

من

300
مليار درهم في 2031

125%
زيادة بالصناعة
التحويلية

النتائج

13.5
ألف منشأة جديدة

125
ألف فرصة عمل
إضافية

زيادة الإنفاق على
البحث بالقطاع
الصناعي



أهم الأهداف

رفع تنافسية
الصناعات الوطنية
إقليمياً وعالمياً

توحيد معايير
و مواصفات
المنتجات الوطنية

التحول إلى
عاصمة الصناعة
إقليمياً

تشجيع تأسيس
المشاريع
بالإمارات

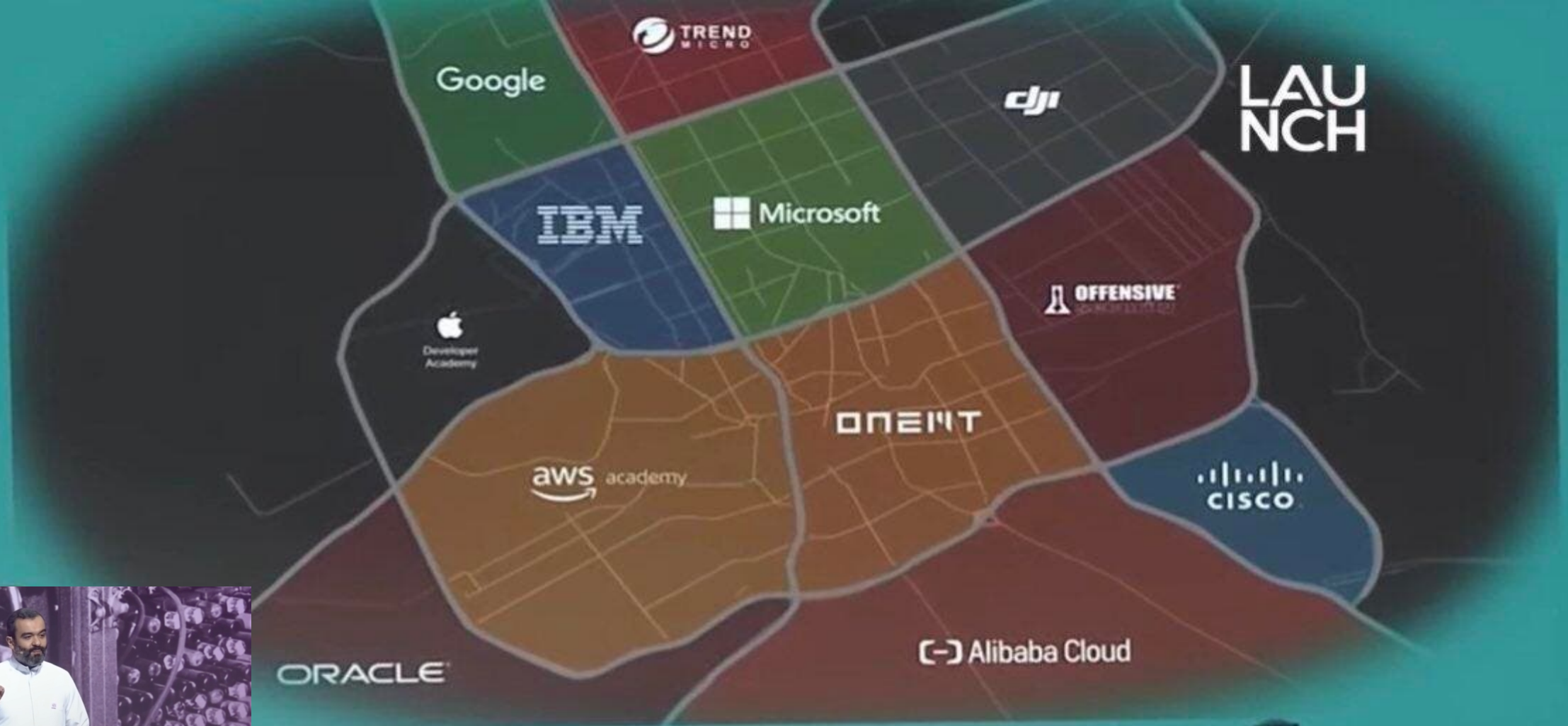


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معالي وزير الصناعة والتكنولوجيا المتقدمة بدولة الإمارات العربية المتحدة:
الهوية الصناعية الموحدة تدعم النمو الاقتصادي المستدام



أول محطة ذكية
لشحن العربات الكهربائية
مائة في المائة مغربية



أول رقائق ذكية سعودية

السعودية تطلق مبادرات تقنية نوعية وصناديق استثمارية بـ 4 مليارات ريال ضمن فعالية Launch الأكبر بالمنطقة... والبرامج تلبي تطلعات المبدعين والمبتكرين



وزارة الاتصالات
والمعلوماتية
MINISTRY OF COMMUNICATIONS
AND INFORMATION TECHNOLOGY



الاتحاد السعودي للأمن
السيبراني والبرمجة والدرونز
SAUDI FEDERATION FOR CYBERSECURITY
PROGRAMMING & DRONES

الفصل الثاني

الاستخدامات الصناعية

لرمال السيليكا



قريبا



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العين (الإماراتية): <https://al-ain.com/article/minister-industry-technology-unified-identity-uae>

البوابة الوطنية (المملكة المغربية): <https://www.maroc.ma/ar/ismart> أول محطة ذكية لشحن العربات الكهربائية مائة مائة في المائة مغربية / أخبار

الشرق الأوسط: <https://aawsat.com/home/article/3152106/> السعودية تطلق مبادرات تقنية نووية وصناديق استثمارية بـ 4 مليارات ريال

شكرا للمتابعة



للمزيد من المعلومات، يمكنكم التواصل مع إدارة المعلومات الصناعية
بالمنظمة العربية للتنمية الصناعية والتقييس والتعدين (AIDSMO)
عبر البريد الالكتروني: iid@aidsmo.org

رابط تحميل العرض المرئي:
link.aidsmo.org/Qgj9U

