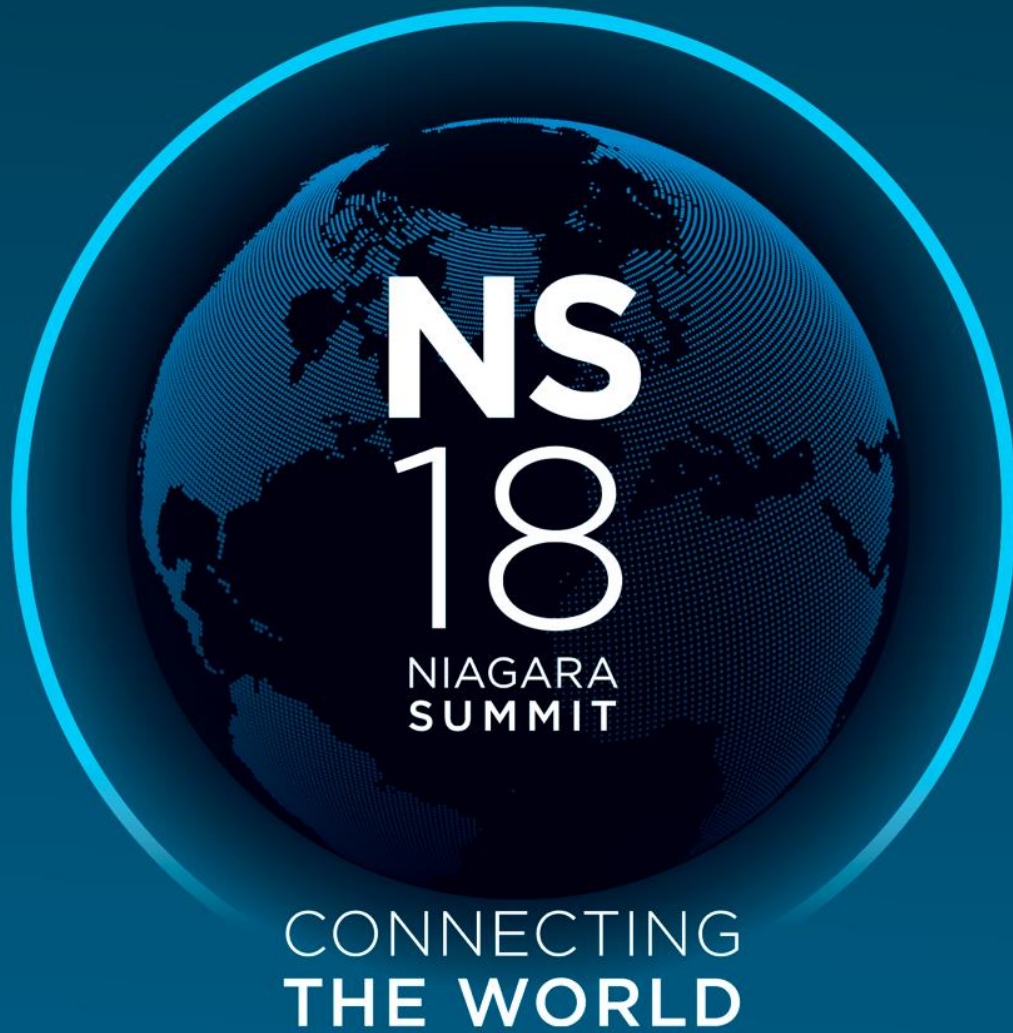




CONNECTING
THE WORLD



Smart Buildings 3.0

Jim Young - CEO, Realcomm

CRE Tech 5.0 Reaching New Heights in Commercial and Corporate Real Estate Innovation



Phase 1 1980-1995



Property Management
Accounting
Lease Admin
Building Automation
IWMS
Asset Management

Phase 2 1995-2002



Dot Com
The "Internet"

Phase 3 2002-2009



Post Dot Com
Survival of the Fittest

Phase 4 2009-2016



Social
Mobile
Analytics

Cloud
IoT
Cyber

Phase 5 2016- ?

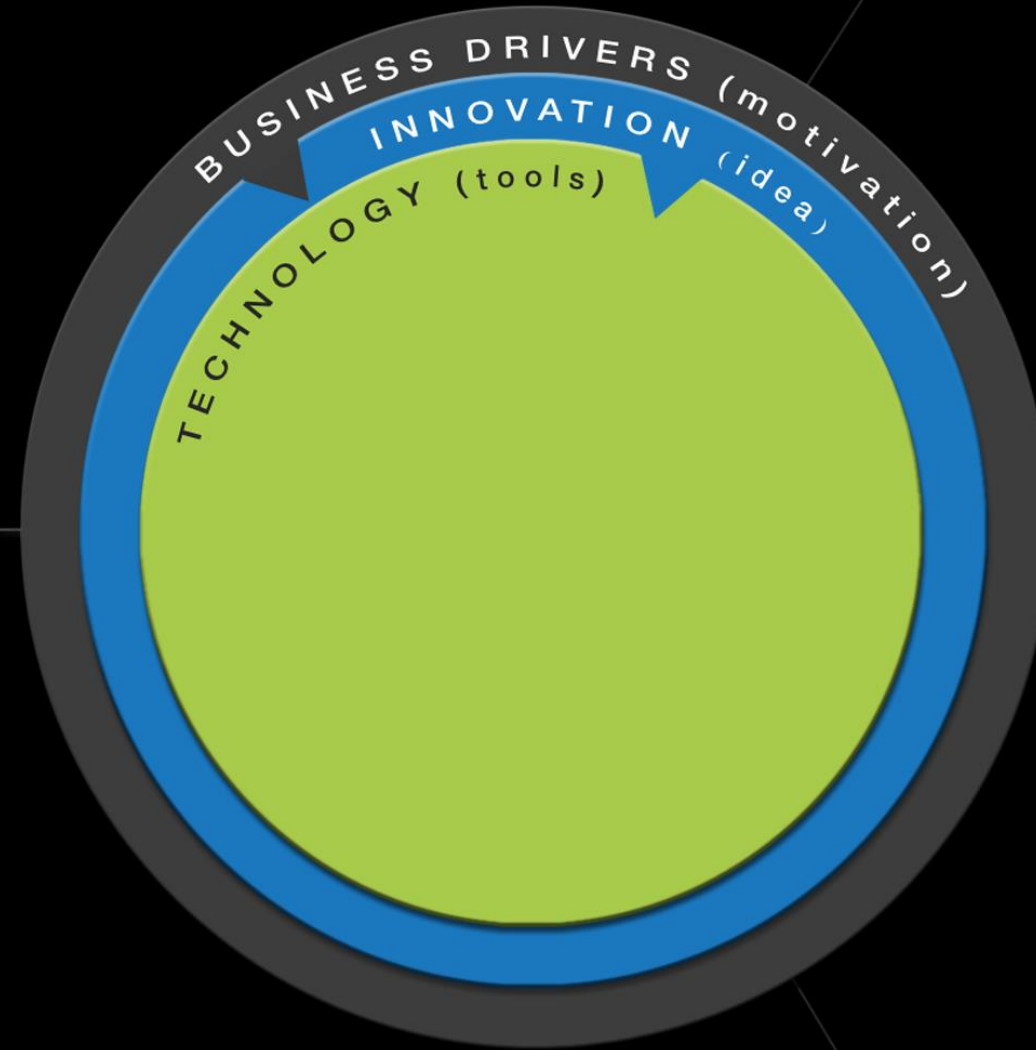


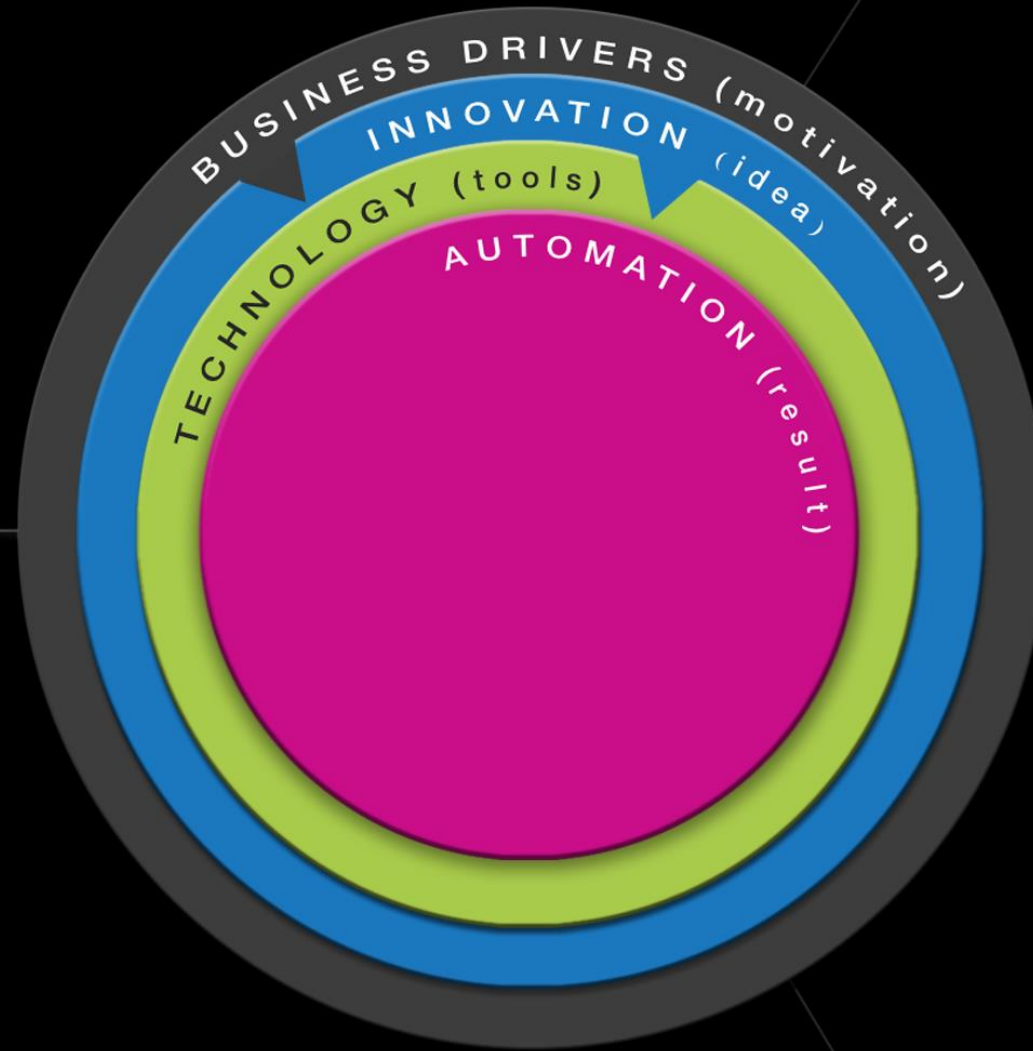
AI/Machine Learning
Blockchain
Augmented Reality
Robotic Automation
Autonomous Vehicles
3D Printing
Unmanned Aerial Vehicles (Drones)

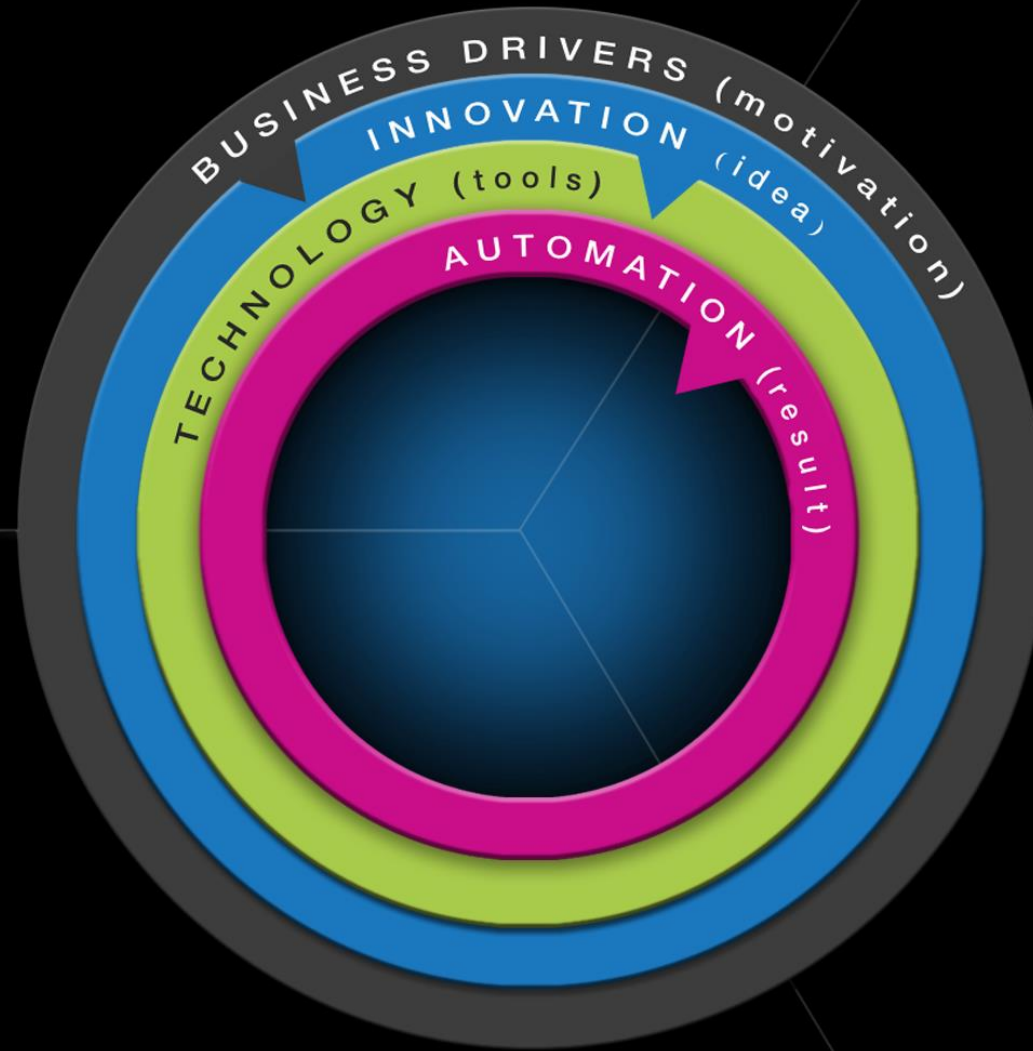


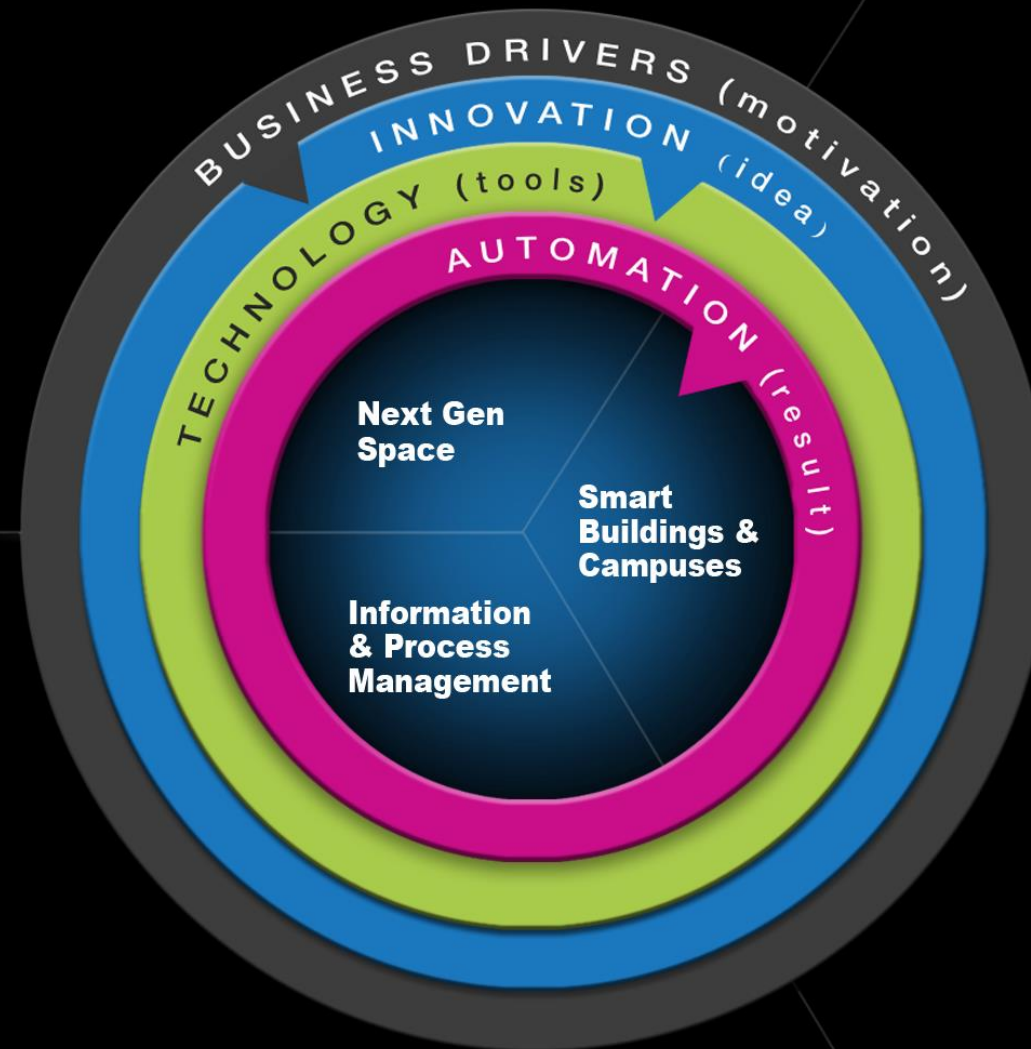
BUSINESS DRIVERS (motivation)











The Information Age and



By Dennis H. Hays
The American Group
January 15, 1998

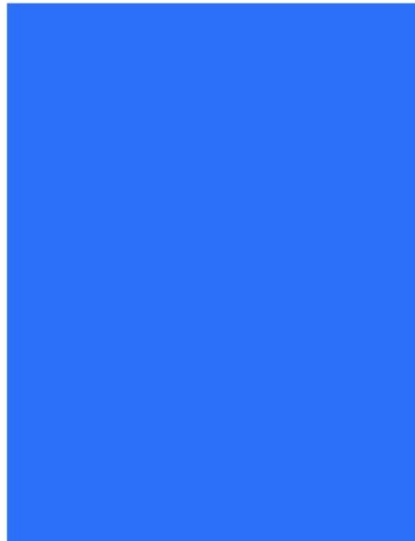
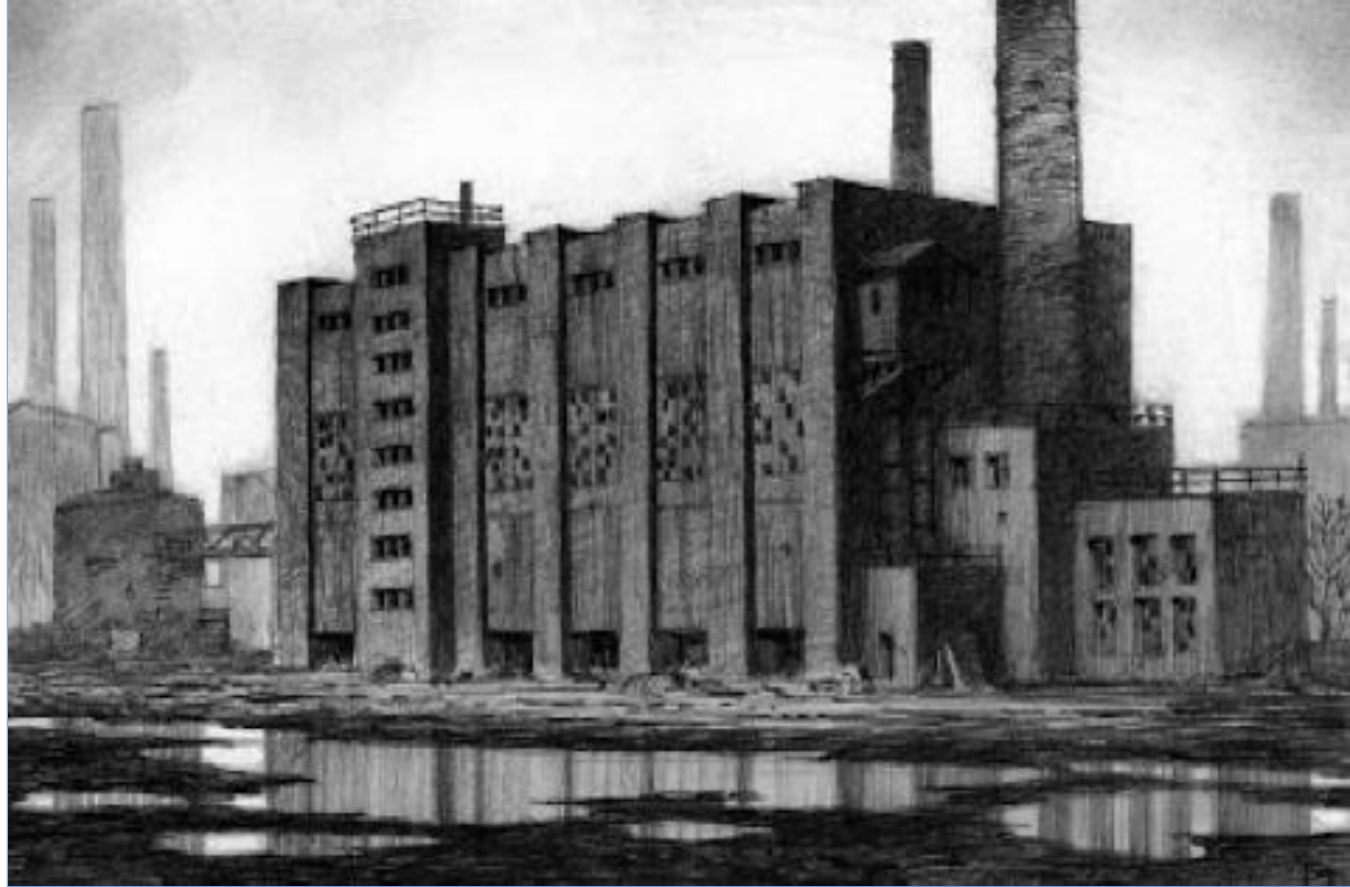
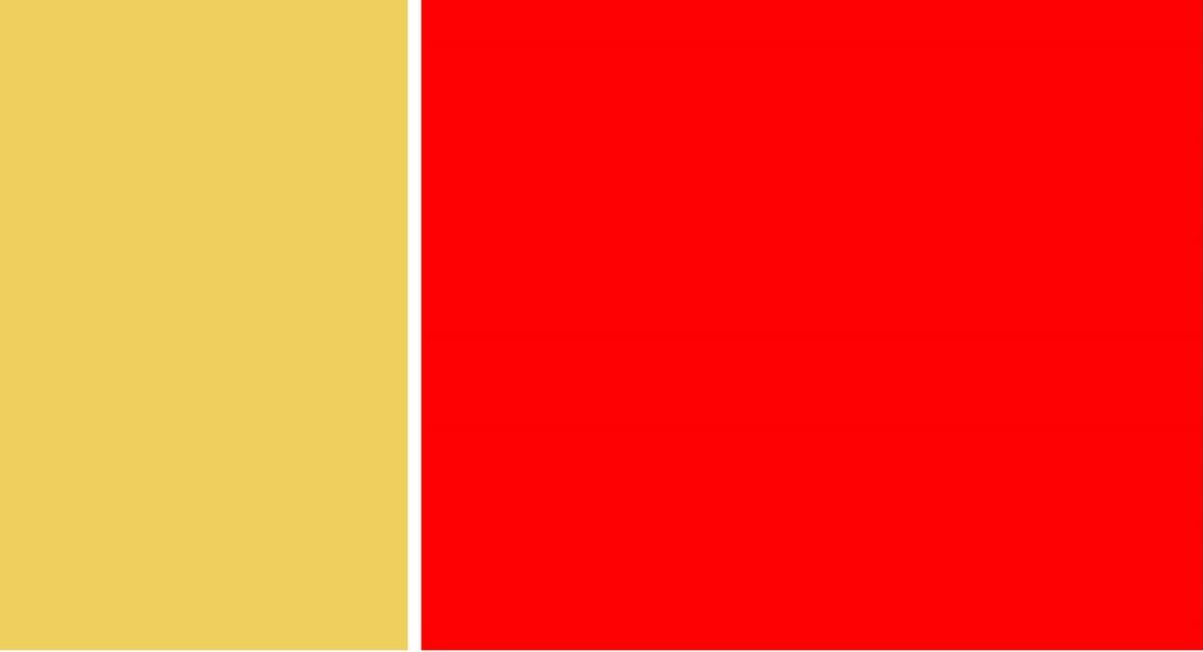
As we enter the 21st century, we are witnessing a profound transformation in the way we live, work, and play. This transformation is being driven by the rapid pace of technological change, particularly in the areas of information technology and telecommunications. The impact of these technologies is being felt in every aspect of our lives, from the way we communicate to the way we work and the way we entertain ourselves. The challenges and opportunities of this new age are vast and complex, and it is essential that we understand them in order to navigate them successfully.

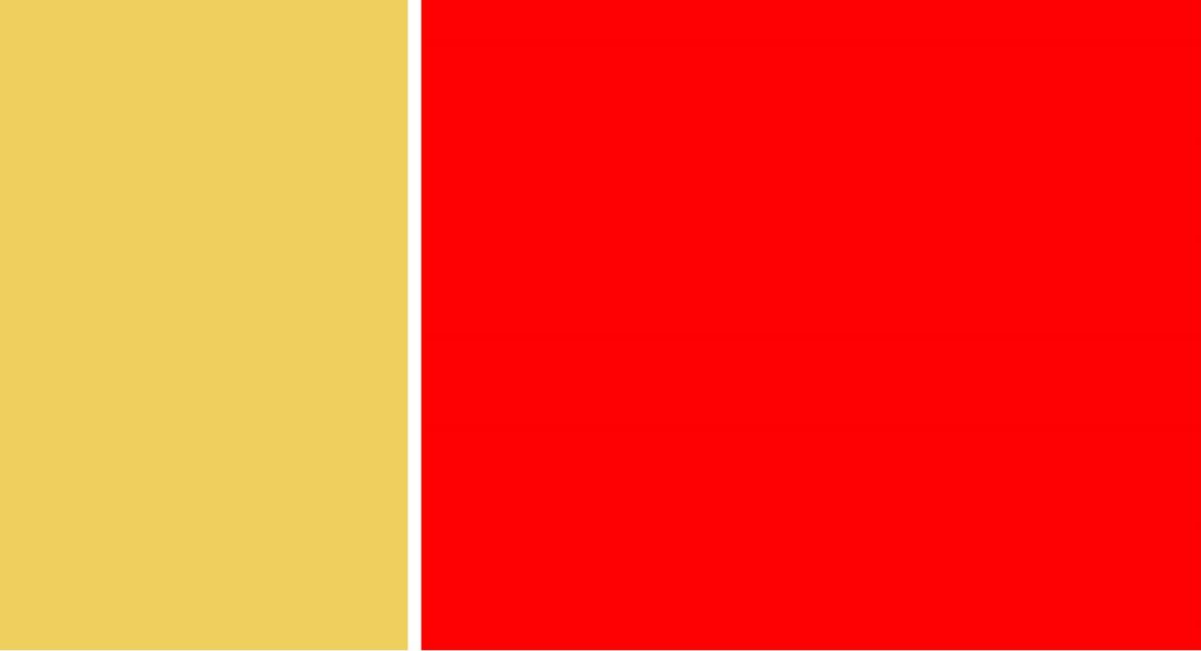
One of the most significant challenges of the information age is the rapid pace of technological change. This change is occurring at an unprecedented rate, and it is essential that we keep pace with it. This requires a commitment to lifelong learning and a willingness to embrace change. Another challenge is the issue of privacy and security. As we become more dependent on technology, we also become more vulnerable to cyber threats. It is essential that we take steps to protect our personal information and our digital assets.

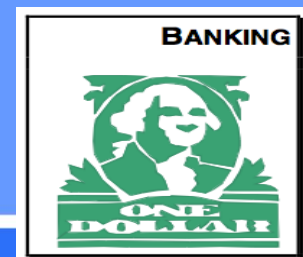
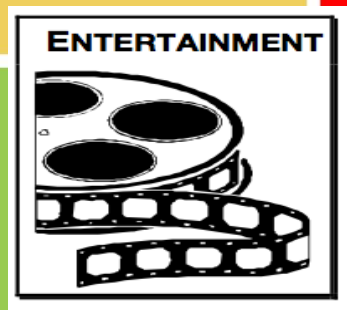
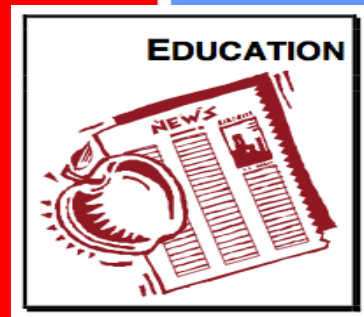
Despite these challenges, the information age offers tremendous opportunities. It has the potential to revolutionize the way we work, to improve the quality of our lives, and to solve some of the world's most pressing problems. It is essential that we embrace these opportunities and work together to create a better future for ourselves and for the world.

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GENERAL BUSINESS ADMINISTRATION



There are many other industries which will be affected by these technological advancements. However, they are too numerous to address. Instead, an analysis of the administrative requirements of business in general will be conducted. The administration of business typically requires an office, at least by historical definition.

The cost of expensive equipment, copiers, fax machines, etc., along with the need to communicate information to co-workers, has dictated the need for people to come together in a traditional office setting. It can be said that business involves the gathering... analysis... creation... and distribution of information. This model does not hold true for every form of business. However, it can be applied to a large number of different types of organizations and therefore, needs to be taken seriously. The following represents a small example of general business models.

“It is becoming apparent that a laptop and a modem are going to redefine how we use space”



App Store



amazon[®]



NETFLIX

You Tube





NEW YORK



CHICAGO



DALLAS



AUSTIN



SAN FRANCISCO



SEATTLE



LOS ANGELES



LAKE NONA



TOKYO



SEOUL



amazingpicturestore.com

NEW SONGDO



DIGITAL MEDIA CITY



HONG KONG



SHANGHAI



BEIJING



SINGAPORE



BANGALORE



LAVASA



LONDON



KUALA LUMPUR



SYDNEY



TORONTO



DUBAI



FESTIVAL CITY



ABU DHABI



MASDAR



YAZ ISLAND

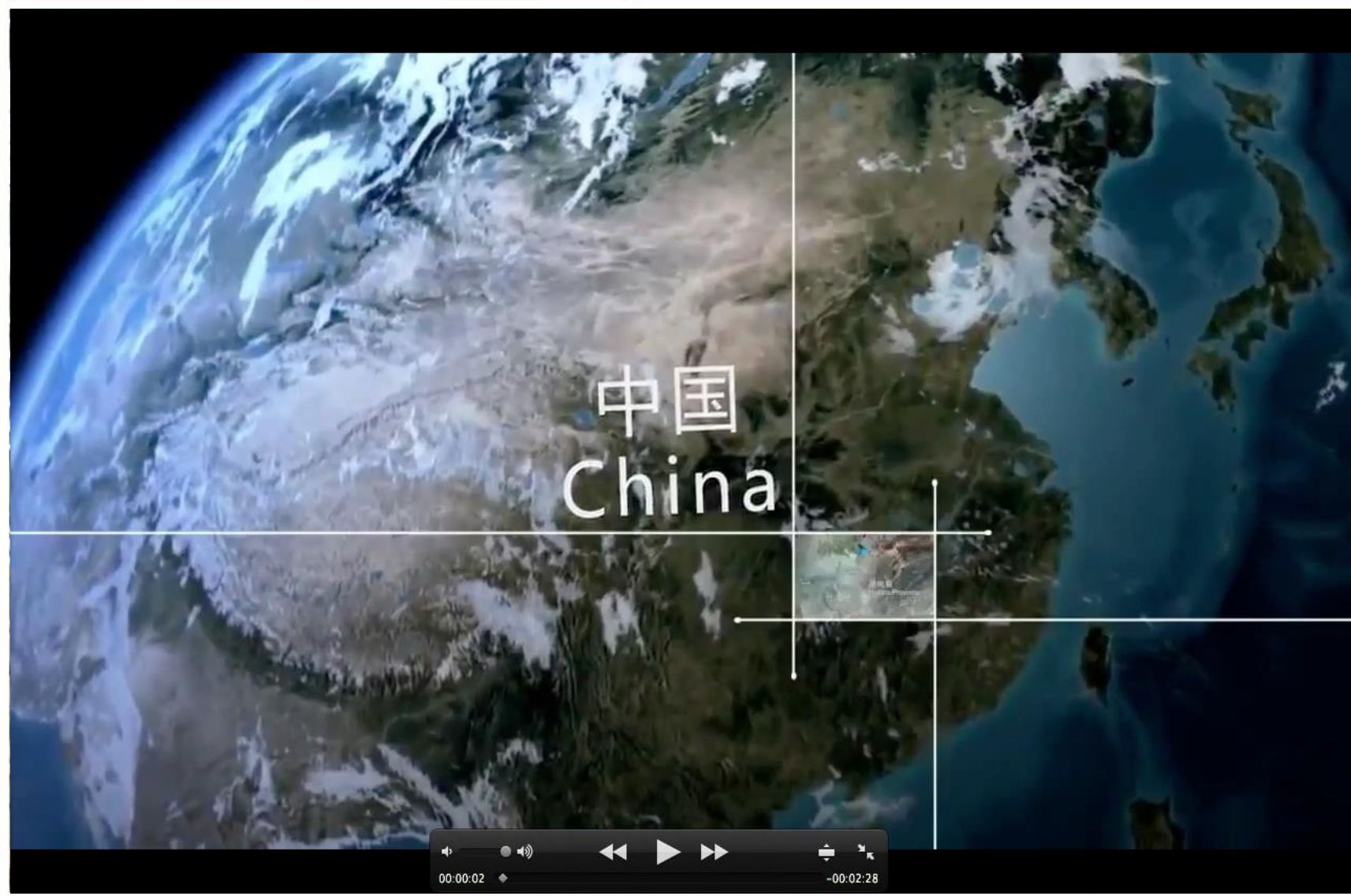


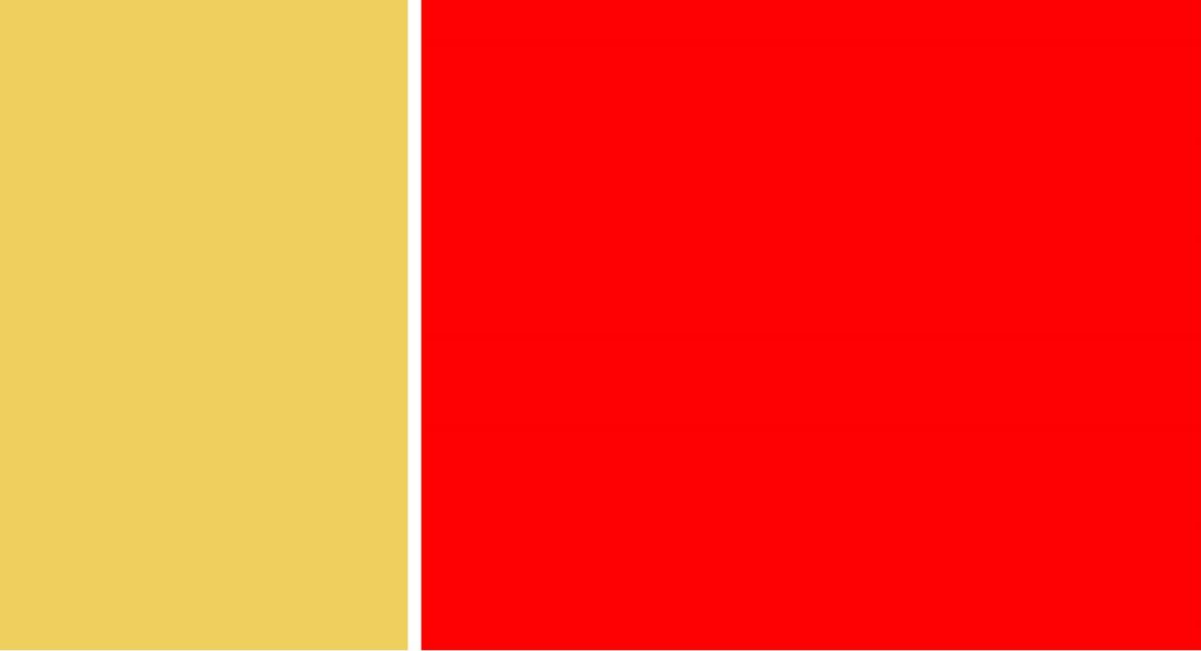
SAUDI ARABIA



PORTUGAL - PLANIT

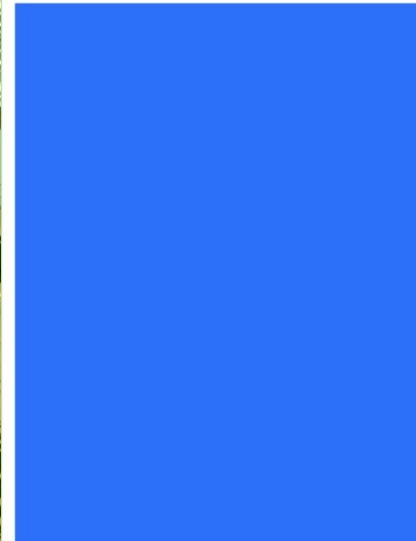


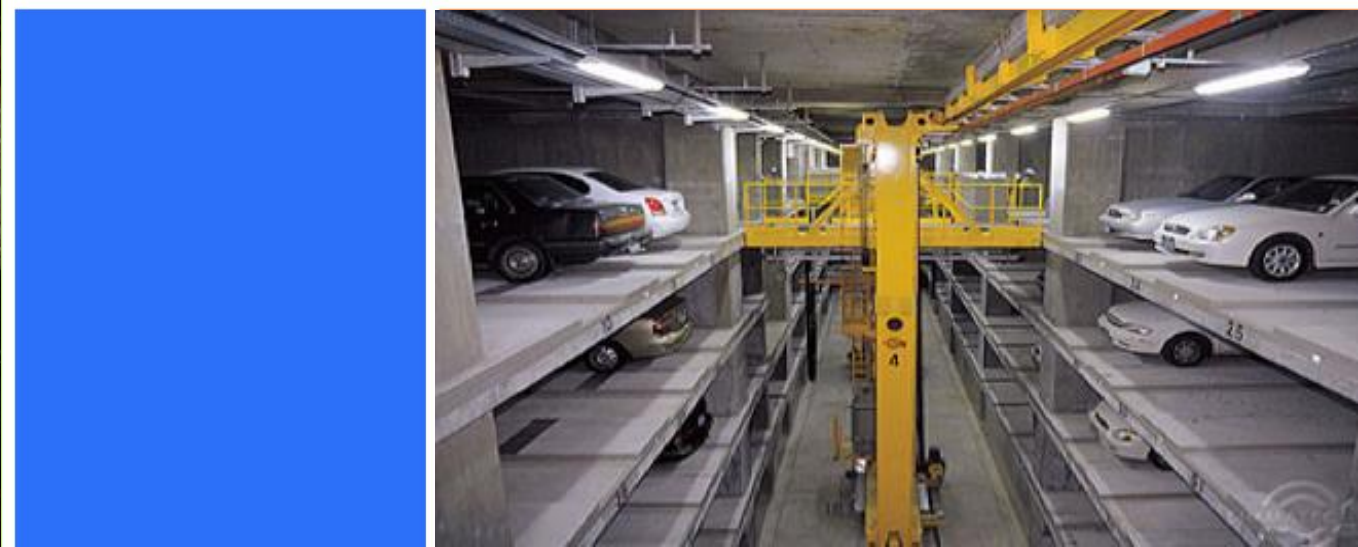
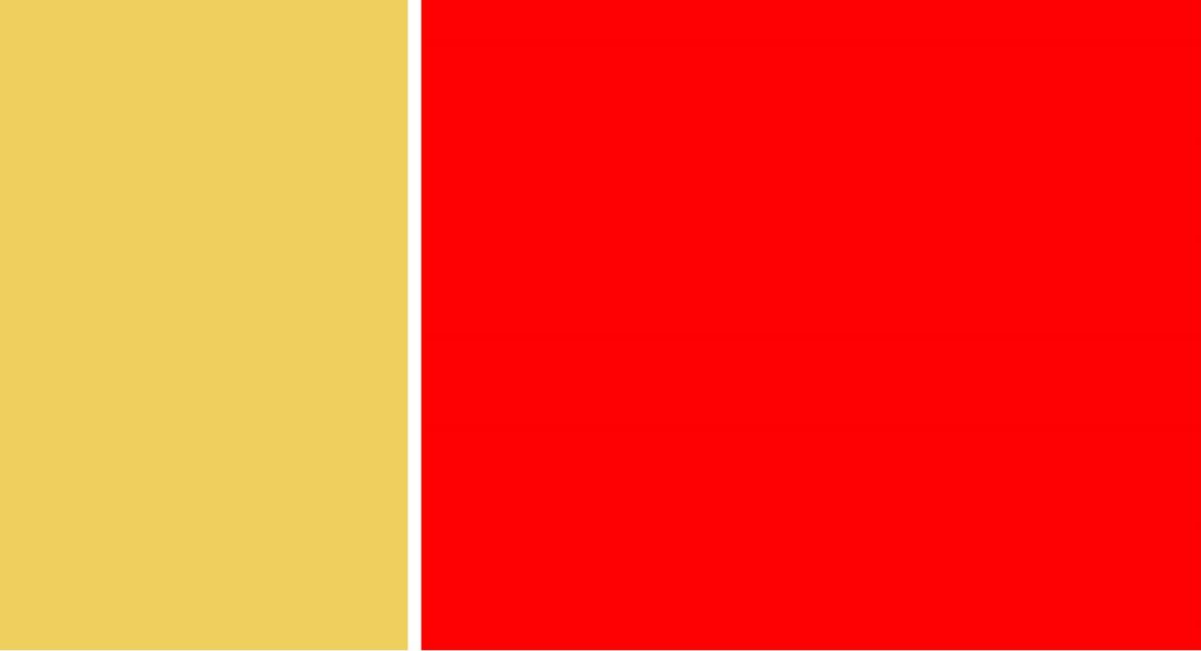






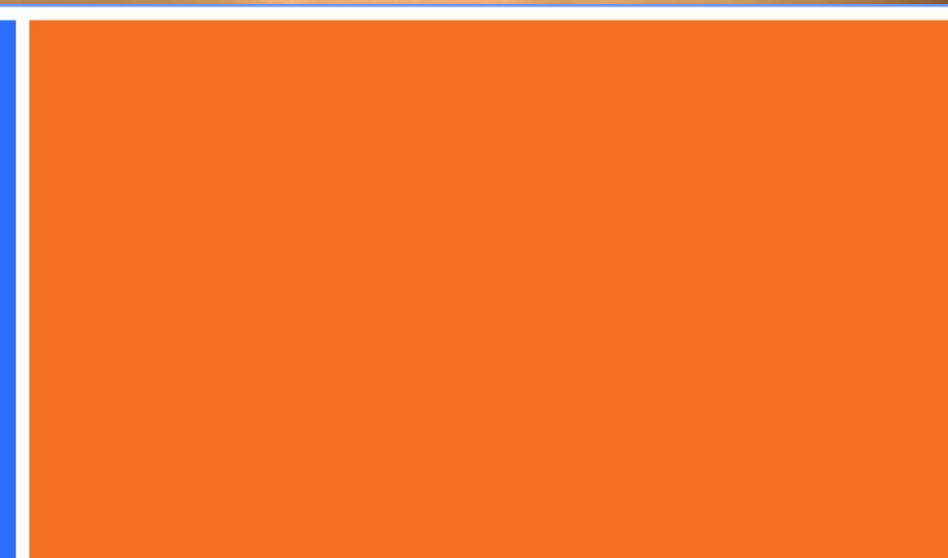
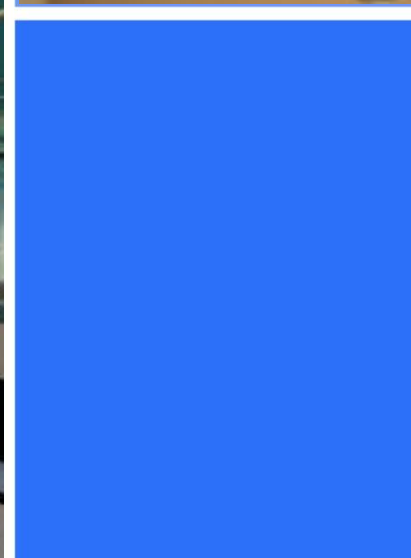
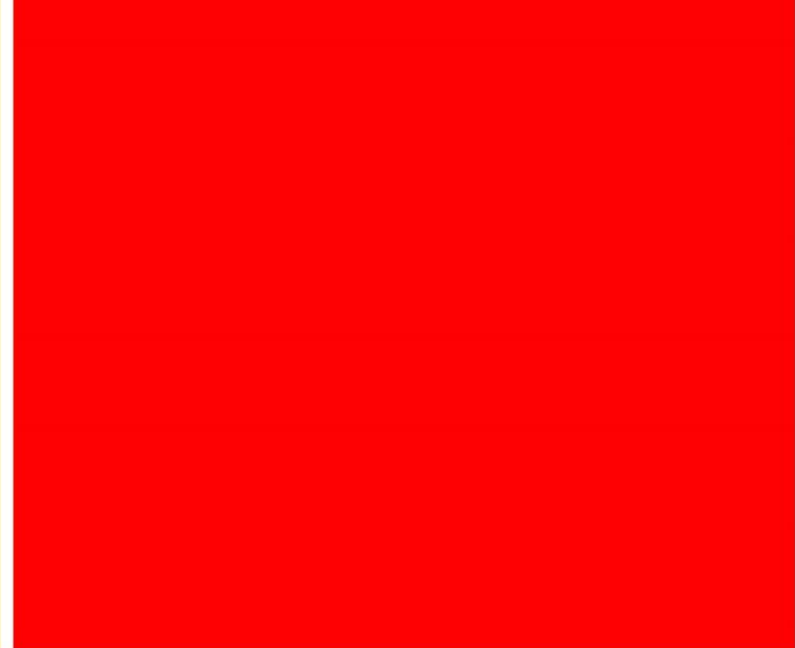
CT/Spectrolabs Microdish
(APS STAR in Tempe)

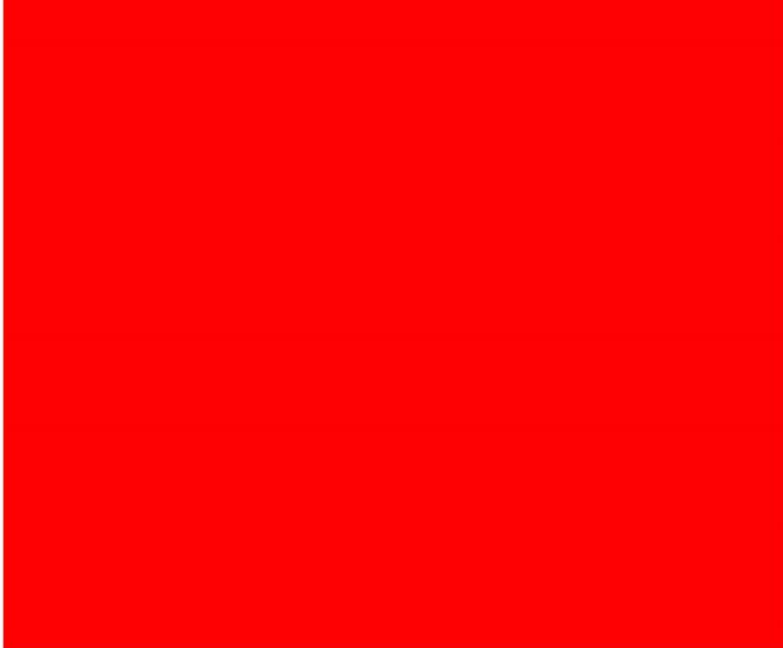




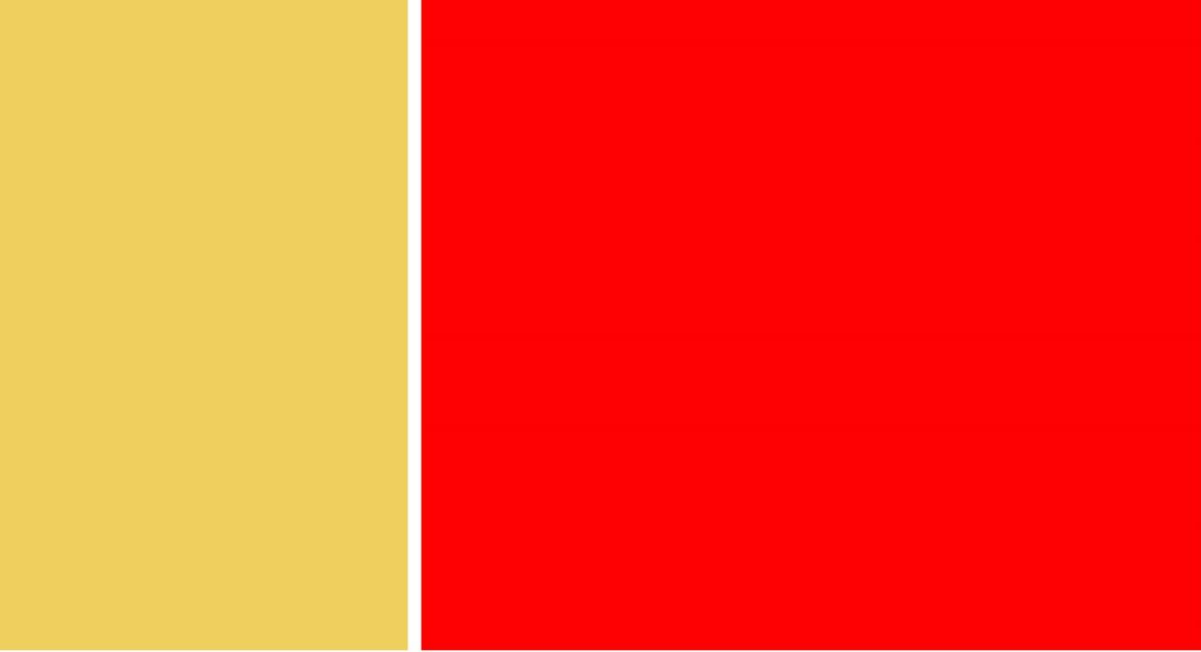




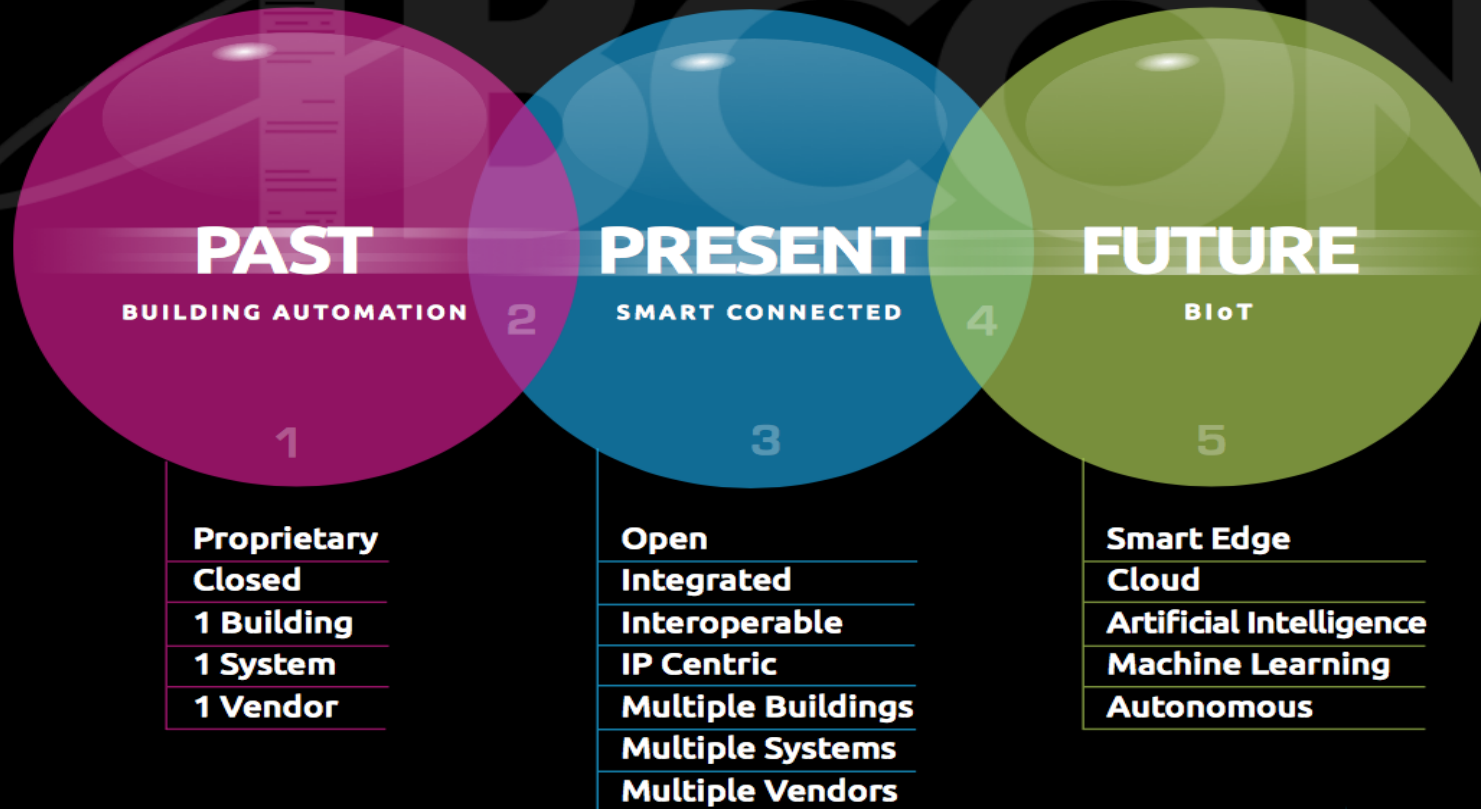








BUILDING AUTOMATION TO THE BUILDING INTERNET OF THINGS



Realcomm

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BCON

Future Property / Facility Operations Automation Architecture Overview



GOALS:

- Energy Conservation
- Sustainability Achievement
- Operational Efficiency
- Occupant Satisfaction
- Financial Optimization

THIRD PARTY APPS & SERVICES

Automated DR/
Load
Management

Outsourced
Security/Life
Safety
Monitoring

Outsourced
Facility
Management

ENTERPRISE APPS

Business
Process
Automation

Data
Analytics
Reporting

Scalable / Robust
Time Series
Database
Business Rules
Engine

IP Gateway / Supervisory
Controller

Standard, Secure Enterprise IP Network (Structured & Wireless)

Data
Normalization

Network
Security

HVAC

Security
& Access

Fire Life
Safety

Water
Management

Audio
Visual

Parking

Voice
& Data

Digital
Signage

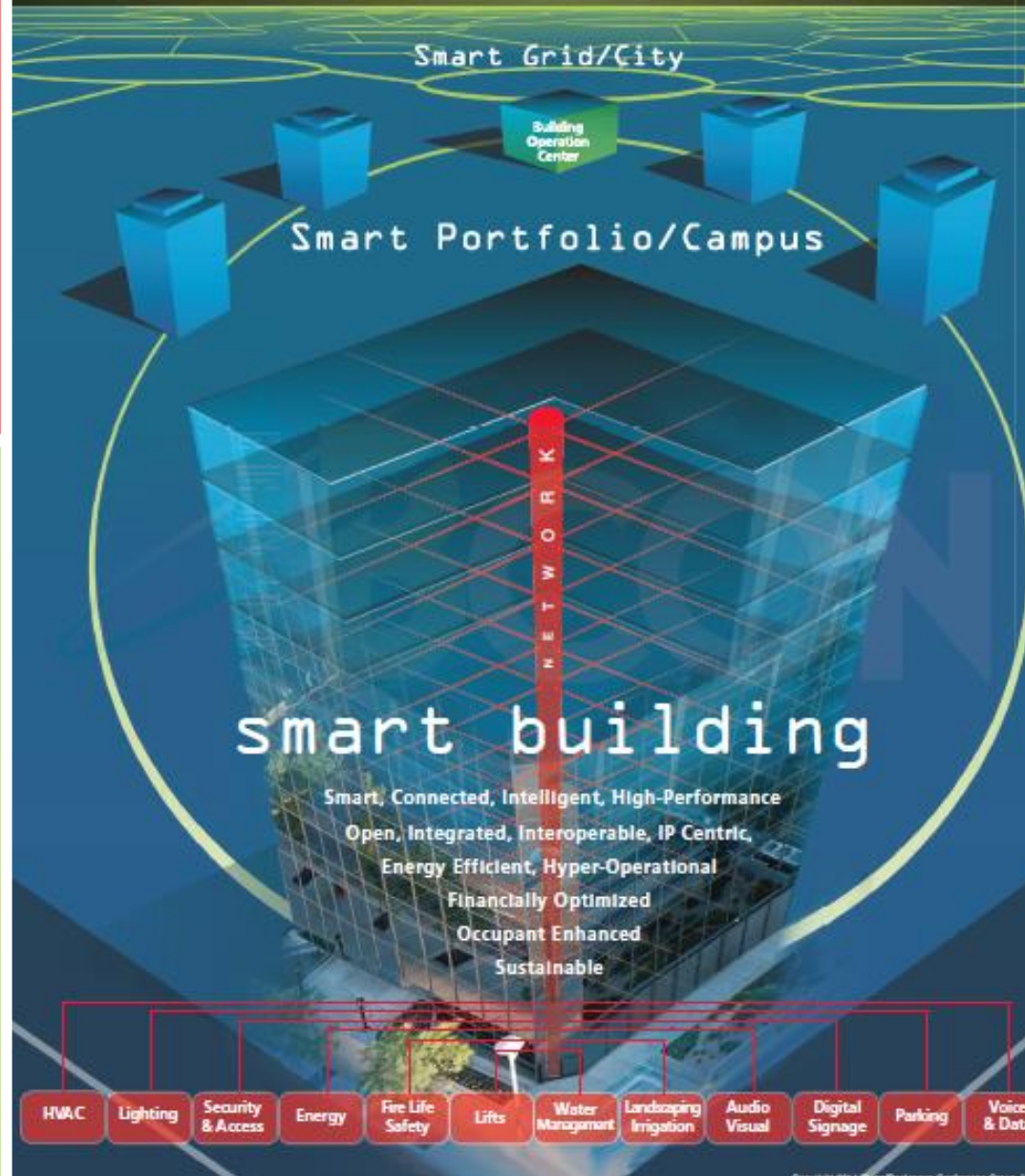
Landscaping
Irrigation

Lifts

Energy

Lighting

DISPARATE BUILDING SYSTEMS



Corporate Real Estate and Facilities Information Management Systems Enterprise Architecture Overview



Industry / Quality Standards
BOMA | OSCRE | IFMA | ISO | FASB | LEED

CRETECH2013
THE FUTURE OF CORPORATE REAL ESTATE OPERATIONS

Realcomm





