SEMINAR
April 28, 2019
9am-4pm
Safeer Fintas Kuwait Hotel

Headline Sponsors
WELCOME ADDRESS

Ali AlSuwaidi

Vice President
MEFMA
Facilities Management
What it really is and How it can deliver Added Value to every Organisation

Presented by
Stan Mitchell
CEO
Key Facilities Management International
www.key.fm
Introductions

- CEO Key Facilities Management International
- Chair British Standards Institution (BSI) FM Committee
- Chair International Standards Organisation (ISO) FM Committee
- Chair UK Government KTP Project – ‘Nanosecond FM in the Autonomous Building’

Stan Mitchell, FIWFM, FRICS, IEng
stan.mitchell@key.fm
stan-linkedin
Facilities Management – What It’s Not

NOT - ‘ONE SIZE FITS ALL’
- 80% perhaps of what we do might be the same
- Every demand organisation will have unique demands and requirements

NOT - FACILITIES SERVICES
- Facilities Services is a distinctly different activity that requires a completely different skill set and competencies

NOT - EASY
- It demands a Professional approach
- It demands a structured approach (ISO 41001)
- It demands the right competencies education and training
Facilities Management – What it is

‘Organizational function which integrates people, place and process within the built environment with the purpose of improving the quality of life of people and the productivity of the core business’

ISO 41011: 2017
Facilities Management

Why Bother?

Relationship of Resources Applied to Performance Impact

FM Resources
(people, expertise, etc)

Organisation Performance
(costs, quality, etc)

Strategic Level

Tactical Level

Operational Level

Facilities Management

Facilities Services

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Facilities Management – Its Value?

Government Research – Whole Life Cost

Design & Construction
• 15%

Facilities Management
• 80%

Demolition
• 5%
ISO TC 267: Observers

Argentina  Bulgaria  Finland  France  Iran  Israel  Italy
Macau  Portugal  Serbia  Singapore  Slovakia  Sri Lanka  Tanzania
Trinidad & Tobago  United Arab Emirates

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ISO TC 267: Participants & Observers
ISO TC 267: Decision-Making Process

TC/SC Route

1. New Work Item Proposal

2. Building Expert Consensus

3. Consensus Building within TC/SC

Fast Track Route

4. Enquiry on Draft International Standard

5. Formal vote on Final Draft International Standard (and proof check)

6. Publication of International Standard

DELIVERABLES:

First Committee Draft or ISO / Publicly Available Specification

Draft International Standard or ISO/Technical Specification

Final Text for Processing as Final Draft International Standard

ISO International Standard

Workshop Route

International Workshop Agreement

www.committee.iso.org/home/tc267

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ISO TC 267: FM Standards Published To-Date

- **April 2017**
  - ISO 41011: Vocabulary

- **July 2017**
  - ISO 41012: Guidance on Strategic Sourcing & Development of Agreements

- **April 2018**
  - ISO 41013: Scope, Key Concepts & Benefits
  - ISO 41001: Management Systems Standard

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ISO 41001: Facility Management’s 1st Management Systems Standard
ISO 41001: A Management System Standard is…

♦ Not a Technical Standard
♦ Applicable across all organisation and sector types
♦ The way an Organisation manages the interrelated parts of its business in order to achieve its objectives
♦ When effective, associated with significant benefits, including:
  ♦ Optimised resource efficiency and financial performance
  ♦ Improved risk management and protection of people and the environment
  ♦ Increased capability to deliver consistent high-quality services and products, and added value for customers and stakeholders

Management: certified companies outperformed the market by 100%+

BSI research on the impacts of ISO 9001

Finance 55% achieved cost savings

Operations 75% boosted performance

Services 75% improved customer service and loyalty

Sales & Marketing 71% retained existing clients and acquired new ones
ISO 41001: A Template for an Optimal FM Regime

Demand Organisation

Context

Leadership

Planning

Support

FM Organisation

Core Business Strategy

FM Strategy

FM Policy

FM Plans

Improvement

Performance

Measure

CHECK

ACT

PLAN

DO

Implement

Improve

© Copyright ISO 41001:2017

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ISO 41012: Strategic Sourcing & the Development of Agreements
ISO 41012: Purpose

♦ Sourcing, not just outsourcing
♦ Management model for In-house Teams and FM Organizations
♦ Assist in determining outsource or insource organisational alignment
ISO 41012: Guidance on…

♦ The Strategic Sourcing Process
♦ The Procurement Process
♦ FM Roles and Responsibilities in the sourcing process
♦ Effective FM Agreements
♦ Why ISO FM Standards are needed, what has been developed to assist, and how they help FM Organisations to define service delivery, set expectations, and measure performance
ISO 41012: Agreements

♦ How to prepare and implement adequate internal or external FM Agreements
♦ Types of FM Agreements
♦ Development, Structure and Content, and clarification of definitions, where appropriate
♦ Articulating Shared Vision
♦ Common Considerations
♦ Essential Components

The Service Provider should recognize the operational and strategic importance of its own operation to the Demand Organisation.

The Demand Organisation should recognize that it has a direct interest in the performance of its Service Provider.

Flexibility
Allocation of Management Responsibilities and Innovation
Communication
Corporal Standards
Asset Replacement & Project Activity
Termin Contracts
Performance Criteria
In Res
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On the Horizon
On the Horizon:
ISO TC 267 Work Items

- **ISO 41014**: Development of Facility Management Strategy
- **ISO 41015**: Influencing behaviours for improved facility outcomes and user experiences
Performance Evaluation

William Thomson 1st Baron Kelvin (1824 – 1907)

TO MEASURE IS TO KNOW

“If you cannot measure it, you cannot improve it.”

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Consistency of FM Value?
Consistency of FM Value:

- To adopt a broader whole-life approach
- To focus on sustainability from design through to management, operations and maintenance
- To identify measurable performance targets to deliver improvement
- To work towards integrated supply chains and reduce waste
- To change procurement to embed whole-life thinking into contracts
- To improve safety and performance through enhanced training and working conditions
Initial Processes:
poorly controlled and unpredictable

Managed Processes:
characterised but generic and reactive

Defined Processes:
tailored and proactive

Measured Processes:
measured and controlled

Optimal Processes:
focussed + continuous improvement

Stepped Improvement of Facilities Management Value
Standards:
Continuous
Industrial Revolution 1
Mechanical Production
1784: 1st Mechanical Loom

Industrial Revolution 2
Mass Production
1908: Model T Ford

Industrial Revolution 3
Automated Production
1969: First Programmable Logic Controller

Industrial Revolution 4
Standardisation (& Digitisation!)

Facilities Management Value

Standards & Digitisation

Revolution Now!

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Value Drivers – three things

STANDARDS
• Focus on sustainability - design through to operation & maintenance
• Identify measurable performance - deliver improvement

COMPLIANCE
• Change procurement approach - embrace evergreen thinking into contracts
• Minimise risk - enhance performance by better training and working conditions

VALUE
• Adopt a broader whole-life approach – everyone wins!
• Integrated supply chains - reduce waste
Internet of Things: Productivity: Space & Staff

- Occupancy, Thermal Comfort, Noise, Lux and Air Quality monitoring
- Providing environmental, compliance and space usage insight and awareness for the future workplace
- Measured evidence to support change as well as drive the workplace to excellence
SME Case Study
Main Benefits

- 65% savings with smart LED lighting
- 38% cuts with smart HVAC cooling
- 15% water efficiency savings
- 10% rentable space freed up from utilisation monitoring
- Significant efficiencies from work organisation and automation
- Enhanced staff experiences: workplace and tools tailored to needs and objectives
Internet of Things:
Alerts & Awareness

- Critical asset monitoring
- 24hr eyes and ears
KAFM: Compliance & Efficiency

- Operational control, visibility, EHS & compliance
- Process standardisation, efficiency & automation
- Easy workforce / supplier management
- One integrated, responsive workstream
- Mobile access, anytime, anywhere!
Digital Twins:

Re-imagine the way you work with your buildings and assets

- Dedicated Stakeholder virtual layers
- Engage and interact
- Visualise performance and conditions
- Augmented Reality and Virtual Reality
- Living reports and performance insight
Digital Twin:

Oversight of the Workplace

- Mapping sites, assets and real-time performance data to an intuitive UI
Digital Twin: Self Help & AI

- Mapping sites, assets and real-time performance data to an intuitive user interface (UI)
- Desk booking, wayfinding and real-time activity based working insights
Digital Twin: Effortless Navigation

- Mapping sites, assets and real-time performance data to an intuitive UI

- Desk booking, wayfinding and real time activity based working insights etc.

- Augmented Reality (AR)
Autonomous Buildings:

Newest member of the FM team

- Free up your FM teams to focus on more proactive value add activities
- Automate typical business functions
- Streamline process
- Open up building/stakeholder groups engagement
  - Sits on top the information architecture 24/7
- Ongoing optimised predictive insight

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Business Intelligence: Instant & Predictive Insight

- Data aggregated from CAFM and IoT systems into reports which enable superior contractual awareness
- Get to the single version of the truth built on the foundation of your corporate drivers
Business Intelligence:

Instant & Predictive Insight

- Artificial Intelligence, Machine Learning and Big Data Analysis

Collate API Collate Analyse Report
KTP Project: A Framework for Autonomous Buildings

• Realising a vision of buildings with the intelligence to manage their own supply chain, raising purchase orders, and coordinating logistics and schedules

• Integrating the Operations and Maintenance Manual with the Digital Twin

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KTP Project:
Engage further with the Digital Twin

- As the workplace becomes more and more digitally enabled your digital twin will grow with you

- Enable your stakeholder communities to have various dedicated digital layers to provide unique and tailored experiences

- Advanced AR for situational markups and proactive service excellence
KTP Output (the best bit):

- It will develop and deliver the model
- It will develop and deliver the evidence
- It will have tried and tested the theory
- It will be validated via several industry partners
- Best of all, we will share the knowledge!
Thank You

Stan.Mitchell@key.fm

شكرا
ESSENTIAL ELEMENTS TO ACHIEVE SUCCESS IN FACILITIES MANAGEMENT PROJECTS

Presented by:
Mr. Ahmad Yousef Al Kandari
Vice Chairman & CEO
United Facilities Management (UFM)
Index

- Facilities management Service requirements.
- Construction warranty against Maintenance contract.
- Construction Cost Against Operational Cost.
- Asset Records.
- Call Center
- CAFM System.
- Advanced Security Systems.
- Raising Awareness Among Facilities Owners.
- Current Examples of the local market.
FACILITIES MANAGEMENT SERVICE

REQUIREMENTS
Facilities Management Requirements

- Service Requester
- Service Provider
- Service requester and provider
❖ Project introduction.
❖ Project purpose and usage.
❖ The drawings (architectural - structural - electromechanical....)
❖ Tables and records for instruments and equipment.
❖ Scope of service and business (clear - concise - comprehensive - homogeneous and interrelated)
❖ Pricing schedules and quantities.
❖ Principles, policies and procedures.
❖ Performance Indicator (KPIs) and Service Level Agreement (SLA).
❖ Study requirements.
❖ Request clarification or answers in case of lack of information.
❖ Site visit and project key components examination
❖ Provide a receipt plan.
❖ Provide an operation plan.
❖ Provide a plan to reduce wasting resource.
❖ Provide a plan to raise efficiency and reduce costs.
❖ Measuring the facility satisfaction.

دعاليمه تطلبات اتش فال كابل.
طلب توضيح أو توضيح حالة تفاصيل معلومات.
زيارة ميدانية وفحص المكونات الرئيسية للخطة.
تقديم خطة مالية.
تقديم خطة تشغيل.
تقديم خطة لتقليل إهدار الموارد.
تقديم خطة لتقليل التكاليف.
آلية قياس معدل الرضا لشاغلي المنشأة.
Joint activity.
Clarifying the service applicant's strategy and linking it with the service provider.
Partnership and cooperation.
Impact analysis of stakeholders.
Consider the development of the Facilities Management Sector in joint decisions.
Strategy Setting of the establishment considering full default age.
Lessons learned and analytical studies to share with stakeholders in the sector.
كفالة إنشاء مقابل عقد الصيانة

CONSTRUCTION WARRANTY AGAINST

MAINTENANCE CONTRACT
### Maintenance Contract vs Construction Warranty

<table>
<thead>
<tr>
<th>Maintenance Contract</th>
<th>Construction Warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Operating Program.</td>
<td>- Manufacturing defect</td>
</tr>
<tr>
<td>- Preventive maintenance.</td>
<td>- installation defect.</td>
</tr>
<tr>
<td>- Proactive maintenance.</td>
<td>- Weariness.</td>
</tr>
<tr>
<td>- Repair the faults.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Facilities Management Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>- maintenance programs Implementation.</td>
</tr>
<tr>
<td>- Providing equipment &amp; tools.</td>
</tr>
<tr>
<td>- Provide consumables &amp; spare parts.</td>
</tr>
<tr>
<td>- Technical staff. Provision.</td>
</tr>
<tr>
<td>- Warranty validity.</td>
</tr>
<tr>
<td>- Terms of warranty.</td>
</tr>
<tr>
<td>- Periodic inspection of equipment under warranty.</td>
</tr>
<tr>
<td>- Achieving the highest degree of benefit to the owner.</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>مسؤولية إدارة المرافق</th>
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<tbody>
<tr>
<td>- سياسة الضمان.</td>
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<tr>
<td>- متضمنة ضمانات، وثائق، وشروط وتعليمات.</td>
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<tr>
<td>- تدقيق وصيانة المعدات.</td>
</tr>
<tr>
<td>- تحقيق أعلى درجات منفعة للمالك.</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Construction Warranty AGAINST Maintenance Contract</th>
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<tbody>
<tr>
<td>- برمجيات التشغيل.</td>
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<tr>
<td>- الاصلاحات الوقائية.</td>
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<tr>
<td>- ضمان التشغيل.</td>
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<tr>
<td>- الصيانة الوقائية.</td>
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<tr>
<td>- المواد والمستلزمات.</td>
</tr>
<tr>
<td>- العناصر والتفاصيل.</td>
</tr>
<tr>
<td>- صيانة الأعطال.</td>
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<tr>
<td>- إصلاح العيارات.</td>
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<td>- سوء التصميم.</td>
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<td>- سوء التثبيت.</td>
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<td>- سوء التثبيت.</td>
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<td>- الفارتفاء.</td>
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<th>دور إدارة المرافق</th>
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<td>- سياسة الضمان.</td>
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<tr>
<th>UFM</th>
<th>MEFMA</th>
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<tbody>
<tr>
<td>المتحدة إدارة المرافق</td>
<td>جمعية الإدارة الوطنية للمرافق المصرفية</td>
</tr>
</tbody>
</table>
COST OF CONSTRUCTION AGAINST OPERATING COST
During construction
High quality ↓
High equipment and materials quality
High construction cost.
Result:
Low operational cost

During construction
low quality ↓
Low equipment and materials quality
Low construction cost.
Result:
High operational cost

During construction
أثناء البناء
مبنى عالي
جودة
جودة عالية من المعدات والمواد
ارتفاع تكلفة البناء

نتيجة:
تكلفة التشغيل منخفضة

During construction
بناء منخفض
جودة
جودة منخفضة من المعدات والمواد
انخفاض تكلفة البناء

نتيجة:
التكلفة التشغيلية مرتفعة

COST OF CONSTRUCTION AGAINST OPERATING COST
جداول تالصول

(ASSETS REGISTER)
❖ All equipment that has certain value.
❖ Mechanical, electrical or electronic equipment.
❖ Inventory of relevant information - Example: Manufacturer - Supplier - Type.
❖ Create codes or serial numbers for each QR Code.
CALL CENTER
Call center 24/7
Reply to queries and queries
Call divert
Classification of Complaints
Daily reports - weekly – monthly
Follow-up ongoing work
Linking business with CAFM
COMPUTER AIDED FACILITIES MANAGEMENT
(CAFM) and it stands for (Computer Aided Facilities Management)
Choose the appropriate system
License
Introduction of assets and equipment
It regulates preventive maintenance etc..
saving information
المتطورة
الأنظمة الأمنية

ADVANCED SECURITY SYSTEMS
- Automated Gate Barriers system
- Automatic Identification System
- Automatic tracking system
- Classification behavior pattern
- Automatic identification of vehicle number plates
- Collecting, linking and analyzing data
- Pre-alarm - by connecting fire alarm systems with surveillance cameras

Advanced Security Systems
RAISING AWARENESS AMONG FACILITIES OWNERS
RAISING AWARENESS AMONG FACILITIES OWNERS

❖ Cooperation with non-profit organizations such as MEFMA and IFMA,
❖ Provide specialized training courses to raise awareness in the public & Private sectors.
❖ Knowledge transfer.
❖ Share Lessons learned from projects (Case study)
CURRENT EXAMPLES OF THE LOCAL MARKET
LOCAL MARKET – EXAMPLES
LOCAL MARKET – EXAMPLES
LOCAL MARKET – EXAMPLES
LOCAL MARKET – EXAMPLES
LOCAL MARKET – EXAMPLES
شكرا لكم...
THANK YOU...
FM Win-Win Equation

Eng. Ahmed B. Al-Eisa
Vice Chairman & CEO
Engineering Systems Group k.s.c.c
ABOUT ESG

Engineering Systems Group Co. is a Kuwaiti based multi-disciplinary shareholding engineering and management consulting firm since 1999 provide a wide range of professional services in the following areas:

- Facilities Management
- Facilities Inspection and Evaluation
- Project and Construction Management
- Property Planning and Development Management
- Economical & Technical Feasibility Studies
- Marine Services, Land Surveying and Soil Testing
- Engineering & Management Training
- B.O.T & PPP Project Management
- Engineering Consultations
- Program Management
- Claims Management & Evaluation
- Planning & Contracts Management
- Human Resource Consultancy
- Engineering software Solutions.

www.esg-kuwait.com
FM WIN – WIN

• Every one is looking for the WIN (Operator / Owner).

• The main challenge we face with owners/operators is miss understanding the meaning of FM.

• Facilities is the largest assets in any company

• Win-Win Equation.

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## WIN-WIN EQUATION

<table>
<thead>
<tr>
<th>Description</th>
<th>Without FM (K.D)</th>
<th>With FM (K.D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Costs</td>
<td>4,000,000</td>
<td>4,000,000</td>
</tr>
<tr>
<td>Energy &amp; Water</td>
<td>2,000,000</td>
<td>1,600,000</td>
</tr>
<tr>
<td>Salvage Value</td>
<td>(600,000)</td>
<td>(160,000)</td>
</tr>
<tr>
<td>O&amp;M</td>
<td>12,000,000</td>
<td>6,400,000</td>
</tr>
<tr>
<td>Replacement Cost</td>
<td>1,200,000</td>
<td>560,000</td>
</tr>
<tr>
<td>LCC</td>
<td>18,600,000</td>
<td>12,400,000</td>
</tr>
</tbody>
</table>

**Design and Construction Costs**: 20%

**Operational Costs**: 65%

**End of Life Costs**: 15%
LIFE CYCLE COST = Y

- LCC: 18,600,000
- FM / O & M & R: 12,000,000
- Salvage Value: 6,400,000
- Energy & Water: 2,000,000
- Replacement Cost: 1,200,000
- Initial Cost: 4,000,000

With FM | Without FM
--- | ---
160,000 | 600,000

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FM WIN – WIN EQUATION

• A change from cost reduction towards adding value

• Adding Value by concentrating on core business.

• Concentrating on core business leads to high return (ROI).

• ROI = X

• X + Y = FM

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WIN – WIN CASES

Asnan Dental Tower

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WIN – WIN CASES
WIN – WIN CASES

Kuwait Petroleum Corp.

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WIN – WIN CASES

Water Front Two
(Souq Sharq)

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Digital Transformation (DX)
The Business Case

Presented by
Suleiman Barada
Managing Partner – Middle East & Africa
S2E Transformation Inc.
DEFINITION & TIMELINE

“Digital is not about digital, it’s not about technology at all”
Owen McCall
What is DX

A cross-functional *business* movement that

1) involves *all* Lines of Business within an organization

2) leverages technological advancements

3) considers market disruption within the industry

in order to establish a new business models and ecosystems that unlock new value streams to sustain and thrive in the digital economy
What is NOT DX

• Technology adoption/upgrade/refresh that is NOT geared towards the creation of well-defined value stream(s)

• Technology initiatives that create IT or business silos within an organization

• Starting an online store or developing a mobile app to sell your existing products and services

“Digital transformation is actually an outside-in process that’s being driven by what is called ‘Digital Darwinism’: Customers are evolving, people are evolving, but business processes, models, and mindsets are not keeping up. They’ve acquired the technology, but haven’t really looked at what’s different about behaviors, expectations, and preferences, or how they can use it to create new value for customers and employees.” Brian Solis
Timeline of Digital Advancements

Digital Transformation has changed everything and is set to continue, as digital options follow an exponential growth path.

Milestones in the digital evolution

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“the companies that give CIOs a seat at the table, make IT a part of their strategy, and realize that the fate of their IT investments and business goals are intertwined will be most ready to face the challenges of tomorrow — and the next decade.” HBR
# Safeguarding the Journey

## Before you get started
- Course
- Capabilities
- Culture
- Timing
- Leadership
- Perseverance
- Communication

## While DX is underway
- Business Model(s)
- Innovation / Pivoting
- Agility
- Governance
- Platform(s)
- CX focus
- Value Streams
When to Transform?

- When relevant digital advancements become available for the industry
- When signs of disruption start to appear in the industry
- When competitors have started to embark on DX
- When customers churn is witnessed
- When revenue streams become unsustainable
DX Disciplines

- Business Architecture
- Innovation Management
- DXMO
- Digital Product Management
- Platform Management
- Digital Competencies Development
- Portfolio/Program/Project Management
DX Framework

PORTFOLIO MANAGEMENT
Provide a framework to analyze investment within and across portfolio.

STAGE 01
DEVELOP STRATEGY
- Develop strategy
- Articulate current state
- Identify strategy impacts
- Map strategy

STAGE 02
ARCHITECT CHANGES
- Organize changes into a strategic roadmap
- Identify impacts, stakeholders, dependencies, and integration points across initiatives

STAGE 03
PLAN INITIATIVES
- Provide high-level scope definition
- Provide framework for requirement development and traceability

STAGE 04
EXECUTE SOLUTIONS
- Provide end-to-end traceability and metrics for consistent measurement

STAGE 05
MEASURE SUCCESS

BUSINESS ARCHITECTURE ROLE

CLARIFY GOALS & STRATEGY
- Map strategy
- Identify strategy impacts

ASSESS IMPACT
- Understand current architecture
- Develop target architecture to translate how strategy will be operationalized

ARCHITECT THE CHANGE
- Compare current to target architecture to identify the necessary changes

IDENTIFY THE GAPS

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Do you have the right capabilities?

The Operational Capability that got you here

Is not the Transformation Capability you need to get there

robliewellyn.com  Inspired by Marshall Goldsmith
By transferring the heat map data into radar charts, you and your teams from IT and the various business functions can understand the current six digital capabilities, and then plan and prioritize the attainment of higher maturity levels.
The Business Case

THRIVING IN THE DIGITAL ERA
The Urgency

“If you don’t like change, you are going to like irrelevance even less”

- Terry Jones (Founder of Travelocity, Founding Chairman of Kayak, Innovator, Game Changer)

THE REALITY

- The customer is in the driver seat
- Start-ups are going mainstream (260 unicorns in the world = close to a trillion dollars)
- Emerging technologies are shifting from dream to reality
- 90% of data in the world was created in last ~3 years
- Even if you aren’t changing, your ecosystem probably is

THE RESPONSE

- Rethink your business model, strategy and experience
  - Terry Jones: “Own the edge, not the assets.”
- Get ready to harness the opportunity
- Transform your organization and transform yourselves

---

1 IBM Marketing Cloud Report, 22 December, 2016

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The Threat

• Market Disruption will turn the current business models obsolete within 3-10 years (various by industry), the time that is just enough to undertake transformation if started now!

• Startups are approaching the market with a whole new mindset and will eventually take over gradually until they collectively become the dominant force

• Customers are learning by the day to become more experience-sensitive and will give no second chance to business models that are not engineered with a customer CX mindset

• Some organizations have embarked on the journey as early movers and are rethinking business models to fit into the future state of their industry
The Opportunity

Growth with Digital – New Revenue Streams

• **Organic**: Upselling existing customers and ramp up market share through digital operational excellence. Reengineer conventional offerings leveraging digital advancements relevant to your industry
  
  • Internet of Things
  
  • Artificial Intelligence / Machine Learning
  
  • Digital Twinning / Virtual Reality
  
  • Blockchain
  
  • Robotic Process Automation

• **Ventured**: foster innovations that are relevant to the business, embrace disruption
  
  • Internal Corporate Venturing: establish the digital dynamics that will allow people to reflect over the future state and contribute to the creation of new revenue streams via innovations, experimentation, and pivoting
  
  • External Corporate Venturing: be open to acquire and merge when viable opportunities arise
Other Drivers

- Enhance Brand Loyalty
- Enter New Customer Segments
- Achieve Operational Optimization
- Drive Workforce Efficiently
- Accelerate Speed to Market
- Deliver Personalized Experience
Why some Leaders are hesitant?

- Lack of digital leadership
- Lack of internal capabilities
- Lack of external assurances
- The technology market is driven by products rather than fit-for-purpose value propositions
- Fear of pursuing inviable innovations
- Fear of rocking the boat and risking the current revenue streams
- Fear of cannibalization
- Etc.
Takeaways

PREPARING FOR A SAFE DX JOURNEY
On the C-Suite Agenda

• Establish a digital direction for the company to embrace disruption and innovate in minimum viable products (quick wins) and scale up over the next 3 years until the revenue streams from digital match or exceed the current revenue streams

• Revisit Corporate Strategy to accommodate the digital directions and ensure digital leadership is established at the C-Suite

• Ensure the organization have employees (or have access to employees) – the digital talents – who are technologically savvy and can think strategically and analytically

• Facilitate Innovation “co-authoring” between Ops, IT, and HR and other LOBs

• Bridge silos between Ops, IT and HR to make sure they have the tools to deliver a consistent, high-quality experience for customers and employees

• Rationalize technology investments and systems to evaluate, analyze, connect and track data that will drive intelligent business decisions and new value streams that weren’t possible without the digital advancements

• Identify potential partners. For many companies, the transition to digital business models will require partnering with a service providers that already have a proven framework and that are well equipped with tools, technologies and talent to accelerate the transformation
Sample Roadmap

2019

Category 1

Current State

Category 2

Future State

Category 3

Category 4

Category 5

2021

Sample text

This is a sample text.
Insert your desired text here.

This is a sample text.

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This is a sample text.
Insert your desired text here.

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Call to Action!

• Conduct a C-Suite Workshop to identify Digital Use Cases, develop the Business Case, secure sponsorship, and establish governance

• Evaluate Business Model (SWOT) and Identify Opportunities

• Articulate Digital Business Strategy (harmonized with corporate strategy)

• Identify Impacted Capabilities, Readiness and Changes Needed

• Develop the Digital Roadmap (from a strategic business perspective, inclusive of all business and technology components and framed by capabilities)

• Initiate technology procurement

• Establish Innovation Framework

• Move from Strategy to Execution

• Digital Transformation Culture and Organizational Change

• Define Minimum Viable Products (8-12 weeks sprints)

• Develop Agile Digital Transformation Program

• Release Products and Sustain Revenue Streams (Iterative)
Contact

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LUNCH
Highly Efficient & Cost-Saving Green Building

Presented by
Eng. Ahmad Al-Maraghi
Eng. Abdullah Al-Hebail

Kuwait Petroleum Corporation
• Oil Sector Complex (OSC) is a LEED Certified Building – Gold Rank

• LEED stands for Leadership in Energy & Environmental Design.

• Oil Sector Complex was LEED Gold Certified on 7th May 2017.

• Proper Facility Management Had Substantial Impact To Achieve This Rank
OIL SECTOR COMPLEX

Kuwait City, Kuwait

HAS FULLFILLED THE REQUIREMENTS OF THE LEED GREEN BUILDING RATING SYSTEM CERTIFICATION ESTABLISHED BY THE U.S. GREEN BUILDING COUNCIL AND VERIFIED BY GREEN BUSINESS CERTIFICATION INC.

LEED 2009
EXISTING BUILDINGS: OPERATIONS AND MAINTENANCE

GOLD

May 2017

MAHESH RANADHJA\PRESIDENT & CEO, U.S. GREEN BUILDING COUNCIL.
PRESIDENT & CEO, GREEN BUSINESS CERTIFICATION INC.
### LEED Certified Buildings in the ME

<table>
<thead>
<tr>
<th>SR. NO</th>
<th>COUNTRY</th>
<th>BUILDING NAME</th>
<th>BUILDING SIZE (Sq. ft)</th>
<th>LEED SCORE</th>
<th>CERTIFICATION</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Kuwait</td>
<td>Oil Sector Complex</td>
<td>758,612</td>
<td>67/110</td>
<td>Gold</td>
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<tr>
<td>2</td>
<td>Kuwait</td>
<td>PIC Head Office</td>
<td>173,805</td>
<td>62/110</td>
<td>Gold</td>
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<tr>
<td>3</td>
<td>Qatar</td>
<td>RasGas Headquarters Building</td>
<td>581,451</td>
<td>69/110</td>
<td>Gold</td>
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<tr>
<td>4</td>
<td>UAE</td>
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<td>226,042</td>
<td>81/110</td>
<td>Platinum</td>
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<td>5</td>
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<td>DSOA Techno Point Building</td>
<td>117,598</td>
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<td>Platinum</td>
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<td>6</td>
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<td>7</td>
<td>UAE</td>
<td>BASF Kanoo Polyurethanes LLC</td>
<td>57,410</td>
<td>54/110</td>
<td>Silver</td>
</tr>
</tbody>
</table>

The LARGER the Building, the more Complex LEED Certification

OSC is among the largest LEED Certified Buildings in the ME
New Tariff Effect on Utility Bill

Plan to Tackle Challenge
The Plan

1- Finalize execution of Six Sigma Projects such as:
   • Cooling Tower water consumption reduction project
   • Zone 5 electrical consumption reduction project

2- Finalize execution of Sustainable Energy Projects such as:
   • Beach Well project (Water)
   • Photovoltaic (Solar) project (Electrical)
   • Faucet Aerator Project (Water)
   • Photocell Lightening Operation Project (Electrical)
Six Sigma Projects

6 SIGMA

DEFINIR
MESURER
ANALYSE
INNOVER
CONTROLE

6σ

IMPROVE
ANALYZE
MEASURE
DEFINE
CONTROL
Electrical Consumption Improvement Plan for Zone 5 (TR8)

Project Solutions and Initiatives:

- Replace all conventional lamps in Zone 5 with LED lamps in order to reduce the electrical consumption by approximately 90%.

- Replace all inefficient old motors with more advanced and efficient ones in order to reduce the operation electrical consumption of these motors by 35%.

- Adjust the energy operation plans of some of the high consuming assets to fulfill our current requirements in the **Energy Saving Program** (New Operation plan will be executed when above initiatives are ready along with Cooling Tower project final implementation stage).
Conventional Lamps Replacement Comparison Study for Zone 5

Consumption Cost KD./year

- **Conventional Lamps:** 27766
- **LED:** 25028
- **Total Cost Savings:** 2738

**90% Potential Cost Savings for Converting to LED Lamps**
## Cost Reduction Analysis

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty</th>
<th>Watt/Hr</th>
<th>Total Consumption KW/Year</th>
<th>Total Consumption K.D./Year</th>
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<tbody>
<tr>
<td>Conventional Lamp T8</td>
<td>918</td>
<td>129</td>
<td>1037377</td>
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<td>Conventional Lamp T5</td>
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<td>102</td>
<td>73269</td>
<td>1832</td>
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<tr>
<td><strong>Total Cost KW/Year</strong></td>
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<td></td>
<td><strong>1110645</strong></td>
<td><strong>27766</strong></td>
</tr>
<tr>
<td>LED T8</td>
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<td>38</td>
<td>101861</td>
<td>2547</td>
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<tr>
<td>LED T5</td>
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<td><strong>Total Cost KW/Year</strong></td>
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<tr>
<td><strong>Total Savings T8</strong></td>
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<td><strong>935515</strong></td>
<td><strong>23388</strong></td>
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<tr>
<td><strong>Total Savings T5</strong></td>
<td></td>
<td></td>
<td><strong>65607</strong></td>
<td><strong>1640</strong></td>
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<tr>
<td><strong>Total Savings</strong></td>
<td></td>
<td></td>
<td><strong>1001122</strong></td>
<td><strong>25028</strong></td>
</tr>
</tbody>
</table>
Pumps Replacement Comparison Study for Zone 5

Total Yearly Operation Cost

- **Old Pumps**: 36453
- **New Pumps**: 23340
- **Total Savings**: 13113

35% Potential Operation Cost Reduction from Replacing Old Pumps
Cooling Tower Improvement Plan

**Project Solutions and Initiatives:**

• Supplied and installed VFDs for Cooling Tower fans and connection to BMS as well as optimizing the CT operation program, which had significantly reduced monthly water consumption for cooling tower by over 25%.

• Supply and install automated cooling tower water-treatment controller system and connecting it to BMS. The system will monitor CT water chemical parameters (TDS & PH) continuously and operate blowdown as required. This will eliminate the existing manual bleeding and induce water savings. It is expected to complete by mid February 2018.

• Supply and fix ceramic cladding for cooling tower basin which will facilitate the periodical CT cleaning activities and prevents particle and sediment deposition and this in turn will reduce overall water consumption. The works will complete by end of January ’18.

• Dividing Cooling Tower basin project, which enables the operation of 50% of the cooling tower at a time. This initiative saved makeup water and reduced monthly MEW water bills.
Cooling Tower Water Savings

May-Oct 2016 vs 2017

Water Savings May-Oct: 4,200KD
Faucet Aerator Comparison Study

Auto Faucet Daily Consumption Cost (KD)

With Aerator

158.00

Without Aerator

633.00

75% Potential Water Savings Cost from installing Aerators
Sustainable Energy Projects
Photocell Lightening Operation Project Study

Operation Cost

WITH PHOTOCELL

3863

WITHOUT PHOTOCELL

564

85% Savings Cost from installing Photocells (about 3299 KD yearly)
Beach-Well Project Outcome

Savings From Water Production (KD/Month)

- 100 Gal/Min: 4,800 KD/Month
- 150 Gal/Min: 7,200 KD/Month

Quantity Of Water Production

- 100 Gal/Min: 40,000
- 150 Gal/Min: 60,000

Water well reservoir estimated to last for 20 years.
PV (Solar) Project Outcome
PV (Solar) Project

• Electrical Energy Production from the project is about 1.2 MWhr, which is equivalent to 9-11% of KPC total electrical consumption.

• The potential yearly electrical consumption savings from PV project is about **55,000 KD/Yr**.

• **Project Status:** Currently on construction phase (mounting system and solar panels).

• The project will start producing the proposed electrical energy on December, 2019.
### Zones of Orientation (azimuth) and Maximum PV Power

<table>
<thead>
<tr>
<th>Zones</th>
<th>Orientation (azimuth)</th>
<th>Number of lines</th>
<th>Number of columns</th>
<th>Maximum quantity of solar panels</th>
<th>Maximum PV power (Wp)</th>
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<tr>
<td>SC 1</td>
<td>12°</td>
<td>8</td>
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<td>152</td>
<td>47,880</td>
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<tr>
<td>SC 2</td>
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<td>184</td>
<td>57,960</td>
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<tr>
<td>SC 3</td>
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<td>37</td>
<td>36</td>
<td>1332</td>
<td>419,580</td>
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<tr>
<td>SC 4</td>
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<td>16</td>
<td>128</td>
<td>40,320</td>
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<td>4°</td>
<td>52</td>
<td>28</td>
<td>1456</td>
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<td>SC 6</td>
<td>8°</td>
<td>8</td>
<td>19</td>
<td>152</td>
<td>47,880</td>
</tr>
<tr>
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<td>8</td>
<td>30</td>
<td>240</td>
<td>75,600</td>
</tr>
<tr>
<td>SC 8</td>
<td>12°</td>
<td>12</td>
<td>16</td>
<td>192</td>
<td>60,480</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>3,836</strong></td>
<td></td>
<td><strong>1,208,340</strong></td>
<td><strong>1,200 KW</strong></td>
</tr>
</tbody>
</table>
Thank you
“Linking Facilities Management Strategy To Business Strategy”
MEFMA helps advance the sector through

Networking Events
ملتقيات التواصل

Workshops
ورش عمل

Training Centre
مركز تدريب

MEFMA

Conferences
مؤتمرات

Ta’aseesy
Muhtarif
تأسيسي محترف

Reports
تقارير
Global Village COO

MEFMA VP

Arab Institute of O&M board member

Senior FM professional, FM thought leader in Middle East

15+ years in FM, Asset Mgmt. operations & general management

Founding Team Member & Board Member – MEFMA, GFMA

First Operations Head of Burj Khalifa

Excellence focus | Global best practice implementation

Electrical Engineer (USA) + MBA + International Diploma (Safety)
Dubai - December 2009
Why This Topic

• There is a need to integrate between stakeholders (end use/owner + Owner representative + FM+ Service Provider).
• It will help to achieve synergy and implement best practices.
• Improved process and systems
• Leadership and direction to staff
• Forward Looking initiative.
Why this Topic

Strategic Asset Management Plan

Service Delivery Method
In-house ↔ Out-source

Acquisition Plans
Operations Plans
Maintenance Plans
Disposal Plans
Funding Plans

Policy & Procedures
Systems
Training

condition
Functionality
Utilization
Asset Performance
Cost
2. The Need Of Strategic Planning

- What is your strategy? Is it Fire Fighting type? Day to Day
- SP - Successful in the long run
- SP Vs Implementation /tactical levels
- Longer Range initiative & Ensure working toward ultimate goals
- Linking is very essential
The FM-model of EN 15221-1 is shown below.

FM elements as enablers for corporate organizational success
FM elements as enablers for corporate organizational success
Planning

Failing to plan is planning to fail!
<table>
<thead>
<tr>
<th>OPTIONS</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td>Operational and Strategic Management</td>
<td>Outsourced Managing Agent</td>
<td>In House Direct Employees</td>
<td>In House Direct Employees</td>
<td>In House Direct Employees</td>
</tr>
<tr>
<td>Operational Supervision and Direction</td>
<td>Outsourced Service Providers and Contractors</td>
<td>Outsourced Service Providers and Contractors</td>
<td>Outsourced Service Providers and Contractors</td>
<td>Outsourced Service Providers and Contractors</td>
</tr>
<tr>
<td>Operational Works, Services and supporting Functions and Administration</td>
<td>Specialist Services</td>
<td>Specialist Services</td>
<td>Specialist Services</td>
<td>Specialist Services</td>
</tr>
<tr>
<td>Specialist Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
FM organizational structure options & implementation strategy

**Reputation**: Enhance Company Reputation / “Customer focus” service delivery

**Expertize**: Share expertise and collaboration with Parks Operators

**Execution**: Contract Negotiation, Market Selection and Service Agreements covering tailored industry needs.

**Analysis**: Reduce Life Cycle Cost & improve quality through integrated FM. Provide accurate “asset records” to ensure reliability and system availability

**Improved “brand equity” and reputation though Holistic View**

**Audit**: Regulatory Compliance and Standard maintenance

**Integration**: Asset Management Integrates with all Layers of the Organization
FM organizational structure options & implementation strategy

XXX Customers

OSS-KIZAD

Work Orders

Operation Team on site

Help Desk

Service Request

Building Automation
Mech. Metering System
Solar Shading Sys.
Elec. Metering System
IFMS Systems

Home Automation
Lighting System
PMCS
Lift Sys.
SCADA
3. FM organizational structure options & implementation strategy

Summary proposed solution – Reporting of service provider sample template

Clear standard reporting templates

Condition Assessment

Key Maintenance Indicators

Observation Report

Portal et e-collaboration

Customer Satisfaction

Security Reports

Procurement Analyses

Business Intelligence

Graph Total (total Legal incl)
FM as high potential business unit
FM as high potential business unit
Linking the FM service to assist deliver the strategy of the overall organization; covering:

- Facility goals, needs and priorities
- Facility plans, funding and performance measures
- FM systems, structures and processes

Key elements:
- FM Strategy
- FM Service Delivery Model
- Performance Management System
FM as high potential business unit

FM Complexity:
- Increased management layers: 40% of FM departments have 4 or more management levels
- Increased span of control: often 1 manager to 15 staff
- Communication and Definitions: often less than 70% of common definitions in use

Needs:
- Implementing the right FM service delivery model
- Avoiding the cost of complexity
- Demonstrating FM service “value for money”
FM as high potential business unit

Drivers:
• Increased accountability
• Increased change
• Service outsourcing

Enablers:
• Computer aided FM systems

Typical Needs
- Service Charge Calculation
- Floor Space Allocation
- Asset Optimization
- Efficient Operations
- Risk Management and Business Continuity
- Service Satisfaction
FM as high potential business unit
Case Study on corporate FM transformation

**Core Capabilities**
- Lower energy costs
- Improved operating efficiency
- Greater occupant safety & satisfaction
- Higher utilization
- Improved revenue performance

**Solution Sets**

### Energy Management
- Energy Consumption & Optimization
- Carbon Management
- Greenhouse Gas Emissions Tracking

### Operations Management
- Asset & Work Management
- Portfolio Management
- Facility Maintenance
- Condition Monitoring

### Space Management
- Occupancy Management
- Utilization Planning
- Space Optimization
- Move Management

### Other Areas
- Analytics and Optimization
- Reporting and Dashboards
- Event Management
- Service Request
- Aggregation and Warehousing
- Equipment and Systems Monitoring
- Security
New Trend - Technology Base Operation
The Life-Cycle Costs Of Our Efforts

We all live somewhere, this should be easy...

Clearly the designers need help... Imagine this in an office building
You can only **improve** what you can **measure**

**ENVIRONMENT**
Smart sustainable solutions ensuring happiness and well-being of the citizens.

**SOCIETAL**
Creating a value-based chain recognizing the leadership in technology driven smart initiatives.

**ECONOMIC**
Reducing costs and ensuring profitability to create a robust economy.
5. Case Study on corporate FM transformation

➢ What are the benefits of Realizing Universal Targets?

- **Enhanced Livability** “Better quality of life for city residents”

- **Enhanced Workability** “Job opportunities, economic growth”

- **Enhanced Sustainability** “Careful use of natural and economic resources”
Sustainability is not an added cost it is clever living

Thank You
PANEL DISCUSSION

Implementing Best Practices for the FM Industry in Kuwait

Moderator: Ali AlSuwaidi – Vice President, MEFMA
Panelists:
- Ameera Sultan Bouftain – Acting Head O&M Section, State Audit Bureau
- Elie Emile Khalife – CEO, Ecovert FM
- Dr. Khaled Y. Al-Mutawa - Executive Business Consultant & Vice CEO, Engineering Systems Group (ESG)
- Lama Al Fadala – CEO, Taiba Hospital
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