SAMEX for Horticulture Solutions

SAMEX Systems Ltd.

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☑ Agenda

- Company Background
- The horticulture solutions overview
- Q&A

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☑ SAMEX Systems Ltd.

- A professional EAM and FM consulting firm
一家專業的企業資產設施管理解決方案公司
- Hong Kong IFMA Fellow
國際設施管理協會香港分會會員
- HKIFM Honor Fellow
香港設施管理協會榮譽會員
- Founder of IFMA, Hong Kong Chapter
IFMA香港分會創辦人
- Started since 1995
我們由1995年起開始提供解決方案
- Architectural and Information Technology background
以建築師和資訊科技為背景的公司
- Dedicated on technology appliance on FM/EAM
致力於企業資產設施管理應用方案推廣
- The first company brings the FM concept in Hong Kong
香港第一家引進物業設施管理解決方案的公司

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3

☑ What is SAMEX?

- A computerized asset (horticulture) management system
一套電腦化資產(園藝)管理系統
- Provides historical and critical Assets Information
提供資產的重要資料及歷史記錄追蹤
- Provides a monitoring tool to ensure the works are properly done on-site
提供一個監督工具，以確保現場工作適當地得以進行
- Modules included 所包含之模塊：
  - Asset (Horticulture) Management 資產(園藝)管理
  - Work Management 工作管理
  - Contract Management 合同管理
  - Mobile Solutions (Routine Inspections, RFID, Work Dispatch)
移動解決方案 (定期定點巡檢，無線射頻，工單派遣)
 - Other Functionalities 其他功能

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4

SAMEX – Asset (Horticulture) Management - 資產(園藝)管理

- Asset Life Cycle Management – 全生命週期管理
  - From nursery to retirement, the entire historical CV
    由出生到死亡的完整生命履歷表
  - Use RFID + GPS + GIS to track movement histories
    利用無線射頻 + 全球定位 + 地理信息功能來跟蹤位置改變
    及維修記錄
- Provides Asset's Critical Information – 提供資產重要資料
  - Unique ID, Name, Description (獨立編號，名稱及詳細描述)
  - Location (包括GIS座標位置), Priority
  - Classifications, Date of Installation (分類、原產地，安裝日期)
  - Specifications and Pictures (圖片以及詳細規格，包括種類，
    高寬度，冠闊，受保護級別等)
- Provides maintenance and event history, as well as costs
  - 提供完整維修記錄（剪枝，施肥，以及事故報告等，例如樹枝
    傷人，壓車等)

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SAMEX – Asset (Horticulture) Management - 資產(園藝)管理

- Provides procedure template
  提供維修模板，例如不同種類的樹木需要不同
  維修步驟及注意事項
- Provides safety related instructions
  提供安全相關信息，例如高空作業所需帶備之工具
  以及注意事項

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☑ **SAMEX – Asset Screen Capture** 資產介面樣例
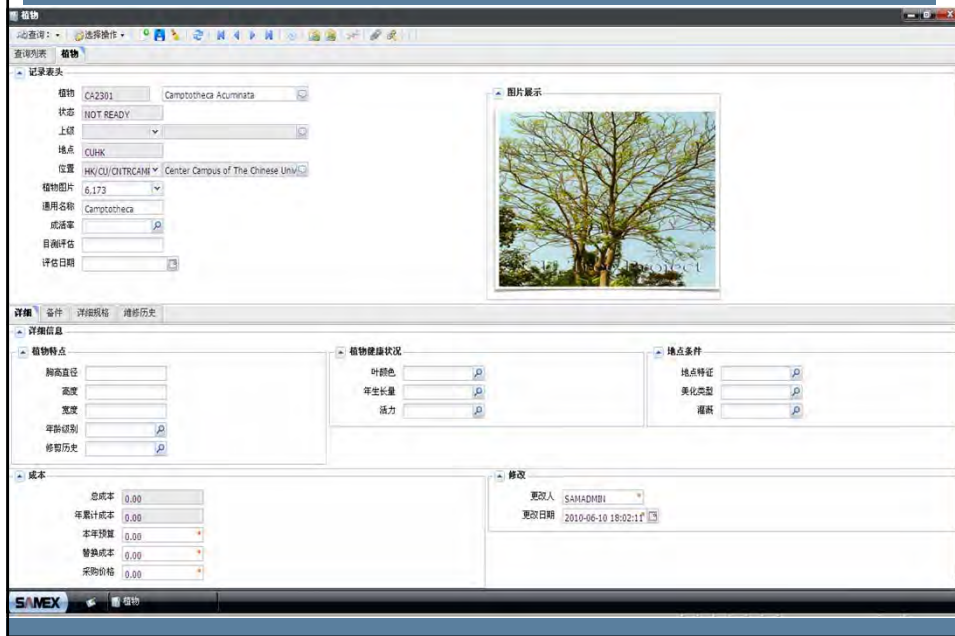
☑ **SAMEX – Asset Screen Capture**資產介面樣例

☑ **SAMEX – Asset (Horticulture) Management - 資產(園藝)管理**

- The steps to setup 使用步驟:
  - PDA to on-site collect asset data – 利用PDA現場收集資料
    1. Asset Number generation from PDA – 由PDA產生資產編號
    2. Collect Plants basic information 收集資產(樹木)基本資料，包括：
       - Photo (利用PDA或者數碼相機)
       - Plants specifications (胸圍直徑，高度，種類，冠闊，葉顏色...)
       - Installation Date and Assessment Condition （安裝日期及樹木評估)
       - Location (利用PDA上的GPS – 衛星定位功能)
       - ...
    3. Attach RFID Tag
       1. 將RFID Tag 植入樹木
       2. 通過PDA將Asset Number寫入RFID Tag
    4. Repeat above steps for other assets (重複以上步驟直至所有樹木數據收集完成)
  - Transmit data from PDA to SAMEX, through GPRS/3G/Wifi (將PDA收集的數據經3G/GPRS/無線網絡傳送至SAMEX)

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9

☑ **SAMEX – Asset (Horticulture) Management - 資產(園藝)管理**

将树木植入**RFID**

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10

☑ SAMEX – Work Management 工作管理

- Proactive Works (Preventive) – 主動式(預防性)工作
    - Time-base PM
      (i.e. Routine Inspections, 月檢、季度檢、年檢)
- Reactive Works – 被動性工作
    - Corrective Maintenance
    - Emergency Maintenance
    - Improvement Project
- Help Desk
    - Event Management （事故報告，例如樹木傾倒傷人、車）
    - Complaints Handling （公眾投訴）
    - Service Request （服務請求）

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11

☑ SAMEX – Proactive Works (Preventive) – 主動式(預防性)工作

- Step 1: SAMEX generates the Inspection Work Orders automatically when the schedule is on due
  當計畫到期時，SAMEX自動產生巡檢工單

- Step 2: SAMEX dispatches Inspection Work Orders to PDA
  SAMEX自動下載樹木巡檢之工單至PDA

- Step 3: Perform all the works based on instructions downloaded
  巡檢人員根據PDA工單上下載的巡檢步驟進行相應的檢查

- Step 4: Record all the inspection results in PDA and write the timestamp back to the assets
  巡檢人員在PDA上輸入巡檢結果，並通過PDA將到場及完工日期、時間寫返去樹木中

- Repeat the above steps to complete all the work orders in PDA
  重複以上步驟，直至PDA上所有工單全部完成

- Transmit data from PDA to SAMEX, through GPRS/3G/Wifi
  (將PDA收集的數據經3G/GPRS/無線網絡傳送至SAMEX)

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12

- 定期更新樹木資料 – 收集樹木粗度、高度，樹葉顏色變化，枯枝情況，冠闊等資料，然後上傳至SAMEX

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13

- 3D Laser Mobile Scanner – 3維車載激光掃描系統, 一天完成核心地區數據採集
  - 數據採集速度 – 時速50公里時，1萬點/秒
  - 數據採集距離 – 80米
  - 數據精細度 : 深度 3 cm, 位置 5 cm

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14

7

☑ **SAMEX** – Reactive Works – 被動性工作

- Work Management – Reactive Works

服務請求 | Internet | GSM/3G/Wifi

樹木管理中心　　SAMEX 服務器　　Telecom Station

GSM/3G/Wifi

完工時間，
工單號碼。。

PDA輸入維修資料，
原因報告等

到場時間，
人員資料，
工單號碼，
。。。

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15
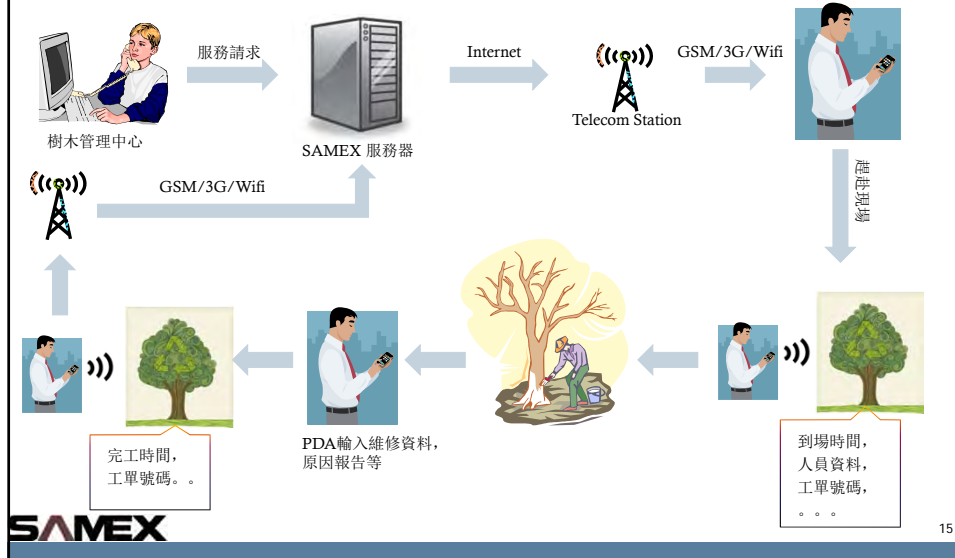
☑ **SAMEX – Contract Management** 合同管理

- Contract Management
  - Asset Warranty Contract – 資產保養合同
  - Service Level Agreement Contract – 服務績效合同

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16

8

☑ **SAMEX – The horticulture solutions**

- Other Functionalities
  - Work@Mailer / SMS Diaptcher（郵件發送器/短信發送器）
    - Confirm and approve through email /SMS
    - Works for any PDA with email/SMS capability

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17

☑ **SAMEX – The horticulture solutions**

- Other Functionalities
  - Multi-Site (多組織，多站點)
    - Operation in site level and manage globally
  - Multi-Language (多語言)
    - Support English, T Chinese and S Chinese
    - Personal profiles, easily switch between languages
  - Automatic Reminder (自動提醒功能)
    - Reminding for any date related records
      - Staff certification expiry
      - Contract expiry due
      - Unmet SLA

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18

SAMEX – The KPI Center
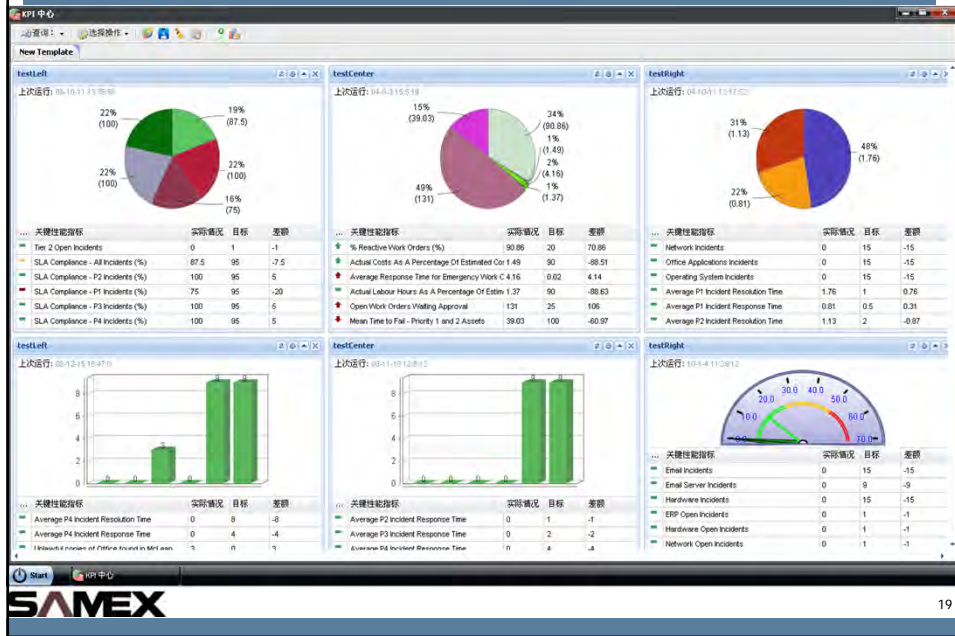
Work Response Time By Site

Site	RESPONSE TIME														
	Overall			Within 0.5 Hours			Within 2 Hours			Within 4 Hours			Within 8 Hours		
	Total	Achieved		Total	Achieved		Total	Achieved		Total	Achieved		Total	Achieved	
CP	103	92	89.32%	53	45	84.91%	1	1	100.00%	48	45	93.75%	1	1	100
DR	627	467	74.48%	245	132	53.88%	55	53	96.36%	201	165	82.09%	126	117	92
SW	486	420	86.42%	215	174	80.93%	34	33	97.06%	103	92	89.32%	134	121	90
Overall	1216	979	80.51%	513	351	68.42%	90	87	96.67%	352	302	85.80%	261	239	91

PM Monthly Forecast Report

Forecast Month: 04/2006
Site: APEC
Trade:

PM/Location/Equipment	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MSB-SC-1-1-13	3			4																											
MSB-2-FB5					3																										
MSB-2-FB6					7																										
MSB-2-FB7					8																										
MSB-2-FB8			5																												
MSB-2-FB9		6																													
MSB-3-FC1						3																									
MSB-3-FC2										5																					
MSB-3-FC3												7	8																		
MSB-3-FC4													8																		
MSB-SC-1-1-1													2																		
MSB-SC-1-1-10														3																	
MSB-SC-1-1-8															5																
MSB-SC-1-1-12																2															
MSB-2-FB2																	3														
MSB-SC-1-1-14																		1													
MSB-SC-1-1-15																			1												
MSB-SC-1-1-16																			1												
MSB-SC-1-1-17																			1												
MSB-SC-1-1-18																			1												
MSB-SC-1-1-2																			1												
MSB-SC-1-1-3																				3											
MSB-SC-1-1-4																					3										
MSB-SC-1-1-5																															
Total Required Hours:	3	6	9		18	3					5	7	18	3	5	2	3	1	5	3	3										

PM Overdue By Equipment
Location: Needham

Equip #	Description	Locarion	PM Number	Days Overdue	Priority
1004	Fire Extinguisher	BR123	PM-1234	1	1
1005	Fire Extinguisher	BR132	PM-3895	5	1
7300	30 HP Drive Motor	BR300	PM-3585	20	1
7400	40 HP Drive Motor	BR400	PM-2345	3	2
7500	50 HP Drive Motor	BPM3100	PM-7474	14	2
12710	Motor 10HP/1750rpm/TEFC/254CT/60hz	NEEDHAM	PM-7964	56	2
13150	Top Breaker System	BPM3100	PM-2375	23	3
13170	Top Sealer System	BPM3100	PM-3432	1	4
23972	Air Compressor	BR132	PM-6734	56	5

Work Order Outstanding Report

| Failure Class	O/S Work Order (Not yet completed)			Total
	Over 7 Days 7-13 days	Over 14 days 14-29 days	Over 30 days > 30 days	
FIRE	0	1	0	1
HVAC	0	1	0	1
PLUMB	0	2	0	2
Total Work Orders:	0	4	0	4
WMATL	0	0	0	0
WSCH	0	0	0	0
WQUOT	0	1	0	1
WAPPR	0	0	0	0
Total Work Orders:	0	1	0	1
CONTRACTOR	0	0	0	0
Total Work Orders:	0	0	0	0
Total Number of Work Orders:	0	5	0	5

Page: 1   of 1   100%

Job Hours By Labour per Month
Location: Needham

Labour	Normal Work Hours	Overtime Hours	Travelling Time	Total Work Hours	Total Allocated Hours	Utilisation
SMITH	120	40	30	190	160	118.75%
WINSTON	95	0	5	100	138	72.46%
HENRY	141	0	4	145	160	90.63%
FOUCH	105	0	15	120	120	100.00%
RICHARD	76	0	10	86	143	60.14%
Total	537	40	64	641	721	88.90%
	83.78%	6.24%	9.98%			

Done   Local intranet

☑ SAMEX – The horticulture solutions

- Future New Functionality
  - Condition Based Maintenance
    狀態監控維修保養
    - 非法樹木砍伐
    - 環境數據收集 (溫度，光度，濕度，磁場等)
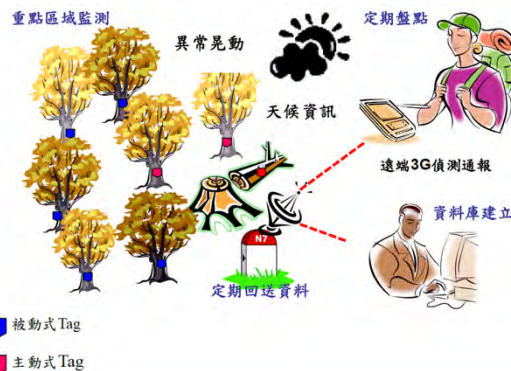
☑ SAMEX – The horticulture solutions

- Future New Functionality
  - ELMAN 動態神經網絡的樹木生長預測
    - 按照樹木種類，生長環境建模，並且計算每年的高度、冠闊
    - 可預算3-30年的生長情況，平均準確度為：
      - 胸徑生長：99.42%
      - 樹木高度：97.30%
      - 仿真度：97.29%

☑ SAMEX – The horticulture solutions

- About SAMEX Platform – 關於SAMEX平臺
  - No need to buy software and hardware，No need to buy SAMEX
    無需購買軟硬件，更加無需購買SAMEX軟件

  - No computer system maintenance, go ONLINE to use SAMEX
    無需電腦系統維護技術人員，只要上網便可使用

  - 5 days preparation to start
    僅需5天時間準備功夫便可使用以上功能

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27

☑ Q&A

Questions...

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28