



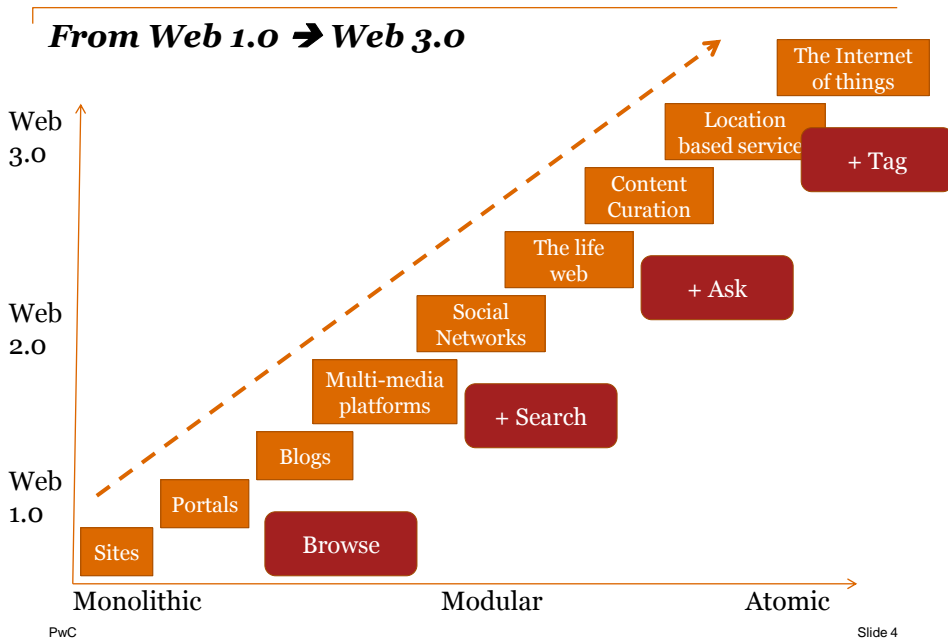
Who am I and who's Aszure/PwC

Aszure is a full subsidiary of PwC Advisory Services cvba/srl

Within Technology, we focus on the security and information risk management part.

Steven Ackx

- As Director, Resp. Day2Day Operations, Aszure Academy
- As CEO, Resp. BCM Academy
- As Principal Consultant, Risk Management, Governance, Business Continuity, Security Mgt, Mobile Business (M-Secure, M-Strategy, M-Transform)



Mobile challenges

- Network connectivity
- Battery life

- Security (data in storage, data in transit)
- Bring your own device (byod)
- Commingling personal, business data
- Ownership and revocation

- Costs (Acquire, Deploy, Develop, Train, Maintain, Support & Carrier costs)

Mobile insecurity from a management point of view
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What's a higher risk?

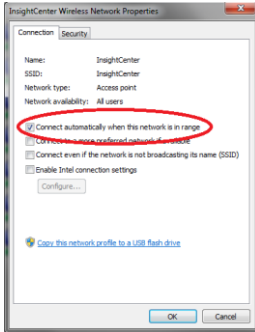
Forgetting a printed confidential e-mail with the report of the strategic management meeting in the replacement car you receive.

CONFIDENTIAL



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Mobiles using unsecure wireless



```

10:10:27 Got directed probe request from F0:7B:CB:15:E8:2E - "bilbao"
10:10:27 Got directed probe request from F0:7B:CB:15:E8:2E - "bilbao"
10:10:30 Got broadcast probe request from 00:24:D7:A7:F3:48
10:10:31 Got directed probe request from F0:7B:CB:15:E8:2E - "bilbao"
10:10:31 Got directed probe request from F0:7B:CB:15:E8:2E - "bilbao"
10:10:34 Got broadcast probe request from F0:7B:CB:15:E8:2E
request from F0:7B:CB:15:E8:2E - "bilbao"
request from F0:7B:CB:15:E8:2E - "bilbao"
request from 00:24:D7:A2:08:3C
request from F0:7B:CB:15:E8:2E - "bilbao"
request from F0:7B:CB:15:E8:2E - "bilbao"
request from 00:13:92:08:99:7B - "WiFi_87"
request from 00:24:D7:A7:F3:48
request from F0:7B:CB:15:E8:2E - "bilbao"
request from 00:24:D7:A2:08:3C
request from 00:13:92:08:99:7B
request from 00:24:D7:A7:F3:48
request from F0:7B:CB:15:E8:2E
request from F0:7B:CB:15:E8:2E
request from 00:22:10:64:32:10
request from F0:7B:CB:15:E8:2E
request from F0:7B:CB:15:E8:2E - "bilbao"
request from 00:1B:95:40:4E:BE
request from F0:7B:CB:15:E8:2E
10:11:01 Got directed probe request from F0:7B:CB:15:E8:2E - "bilbao"
10:11:05 Got directed probe request from F0:7B:CB:15:E8:2E - "bilbao"
10:11:08 Got directed probe request from F0:7B:CB:15:E8:2E - "bilbao"
10:11:08 Got directed probe request from F0:7B:CB:15:E8:2E - "bilbao"
10:11:09 Got broadcast probe request from 00:22:FA:9C:A7:94
10:11:13 Got broadcast probe request from 00:1F:3C:17:5B:7E
10:11:13 Got directed probe request from 00:1F:3C:17:5B:7E - "Linksys"
10:11:14 Got directed probe request from 00:26:B0:85:26:B2 - "MB_OUT"
10:11:15 Got broadcast probe request from F0:7B:CB:15:E8:2E - "bilbao"
10:11:16 Got directed probe request from 00:26:B0:85:26:B2 - "MB_OUT"
10:11:16 Got directed probe request from 00:26:B0:85:26:B2 - "MB_OUT"
10:11:18 Got broadcast probe request from 00:24:D7:A2:08:3C
10:11:18 Got directed probe request from F0:7B:CB:15:E8:2E - "bilbao"
10:11:18 Got directed probe request from F0:7B:CB:15:E8:2E - "bilbao"
    
```

- Capture the probes → fake the AP → client will automatically connect
- Easy to exploit, victim will probably never know (Smartphone)...

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Commingling Personal & Business Data

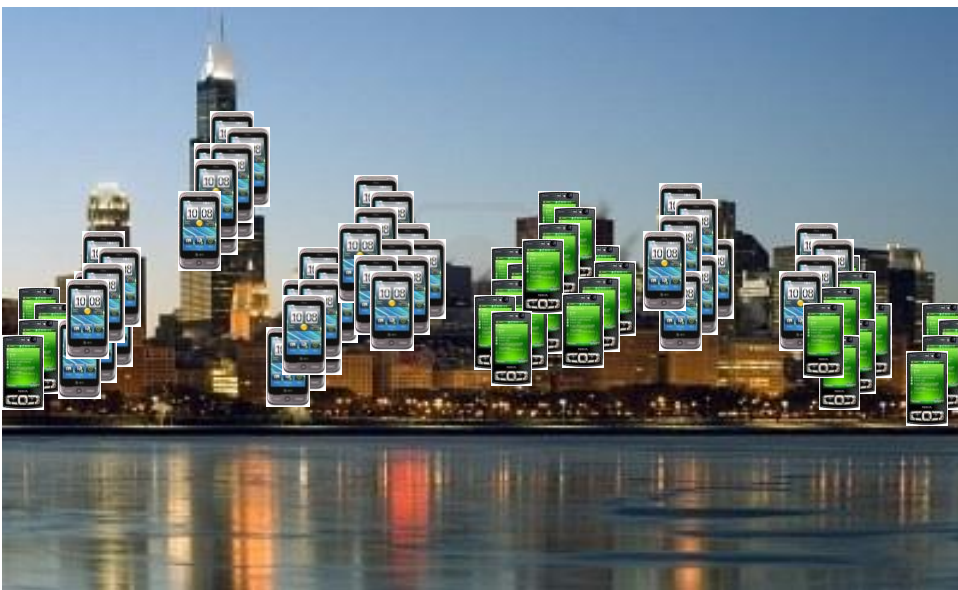


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Office buildings before 16h ...



Office buildings 16h05



Office buildings 16h10



What's the use of glasses & candles, if the Owl...



Look at your phone

What are you running?

How sensitive is your information?

Where is your data?

What could happen if your phone is stolen?

Where is your backup?



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Management Statement

Today Mobile Business is driven by functionality.

Today Mobile Business is about features.

Today Mobile Business is about enabling business.

Tomorrow Mobile Business will be about Secure Mobile Business.

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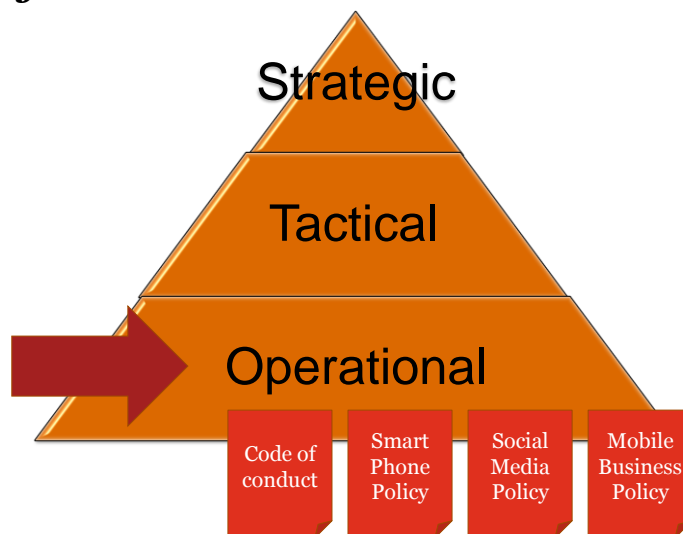
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Strong business case

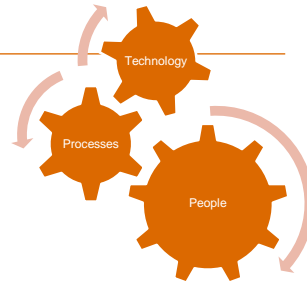
Benefits and business drivers:

- Empower employees to be more productive
- Improved customer service
- ***“Fast, reliable wireless communications”***
- Improved decision making capabilities
- Mobilization of business processes and line of business applications

Policy



Awareness



**Without proper awareness in the entire organization
and to all stakeholders your
Mobile Business project
*will not be secure.***

Preaching to the unconverted - Awareness-raising

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Management - Byod

Bring your own device programs are becoming popular, because:

- They allow employees to work with their device of choice → **increase employees satisfaction.**
- **Reducing** the IT equipment **acquisition costs.**

BYOD programs are increasingly being extended:

- In the breadth of devices
- In connectivity to the corporate infrastructure

→ Rise to new security and management challenges for corporate IT.

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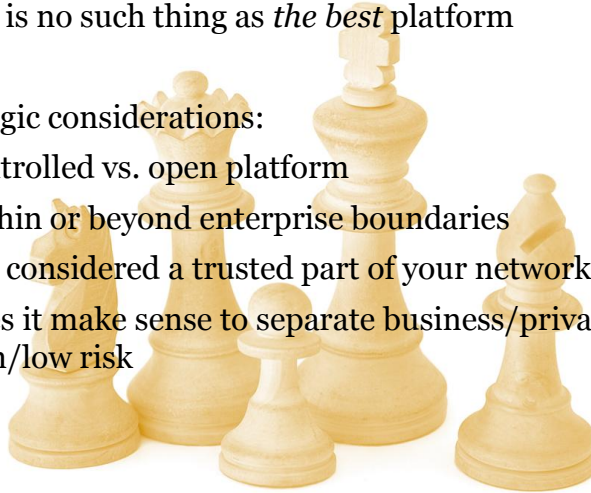
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Security Technology

There is no such thing as *the best* platform

Strategic considerations:

- Controlled vs. open platform
- Within or beyond enterprise boundaries
- Is it considered a trusted part of your network
- Does it make sense to separate business/private or high/low risk



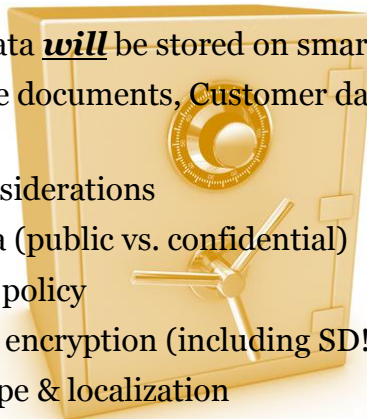
Security Technology – Data protection

Enterprise data ***will*** be stored on smartphones

- Mail, Office documents, Customer data, ...

Strategic considerations

- Which data (public vs. confidential)
- Enterprise policy
- Full device encryption (including SD!)
- Remote wipe & localization



Security Technology – Physical Security – System Hardening

- Small & agile devices -> high risk of loss
- Real solutions are scarce - do they really provide benefits ?
- User authentication
- Update & Patch management (Core libraries vs. applications)
- Virus scanners
- Running services
- And then there is jail breaking ...

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Security Technology – Application management

A Smartphone without applications is like ...



Do you support trusted vs. arbitrary apps?

Who defines and assesses trust?

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Challenges...

Striking a balance:

- Security vs. Accessibility
- Enabling the business while protecting it



What's the best solution?



Add closing statement here...

Mobile security is not a new type of game, although it has its specificities.

You're working with a fully functional platform.

Enterprise roll-out requires careful considerations.

Mobile application security is a must and a challenge.

We can not turn back time.

It's life Jim, but not (exactly) as we know it ...

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Before we say goodbye

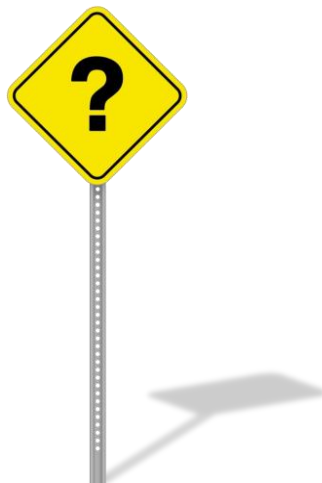
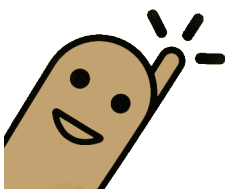
- Lock your screen
- Enable remote security services
- Store as few sensitive information as needed
- Use encryption
- Back up your data securely
- Beware of what you install 
- Do not jailbreak/root your device
- Do not connect to untrusted Wi-Fi access points
- Do not skip updates

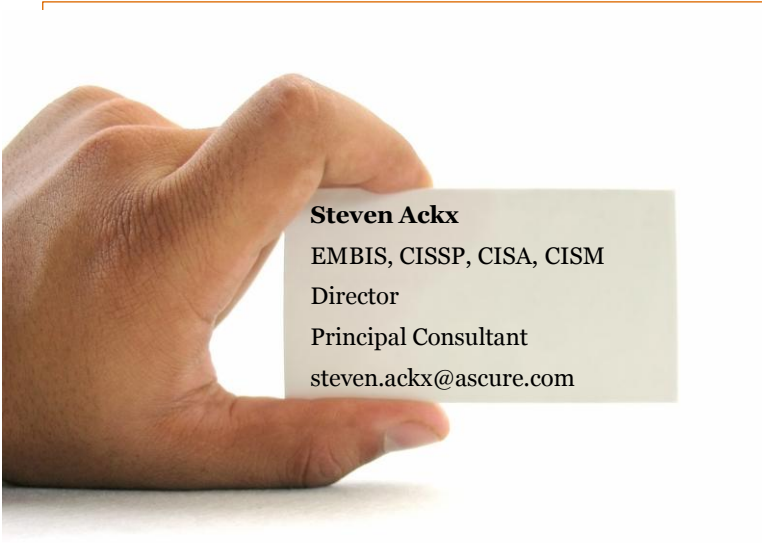
Do not assume your mobile is safer than your PC

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Questions

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Mobile Security

From a management
perspective

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