



Mobil sicher – sicher mobil

Münchener Kreis

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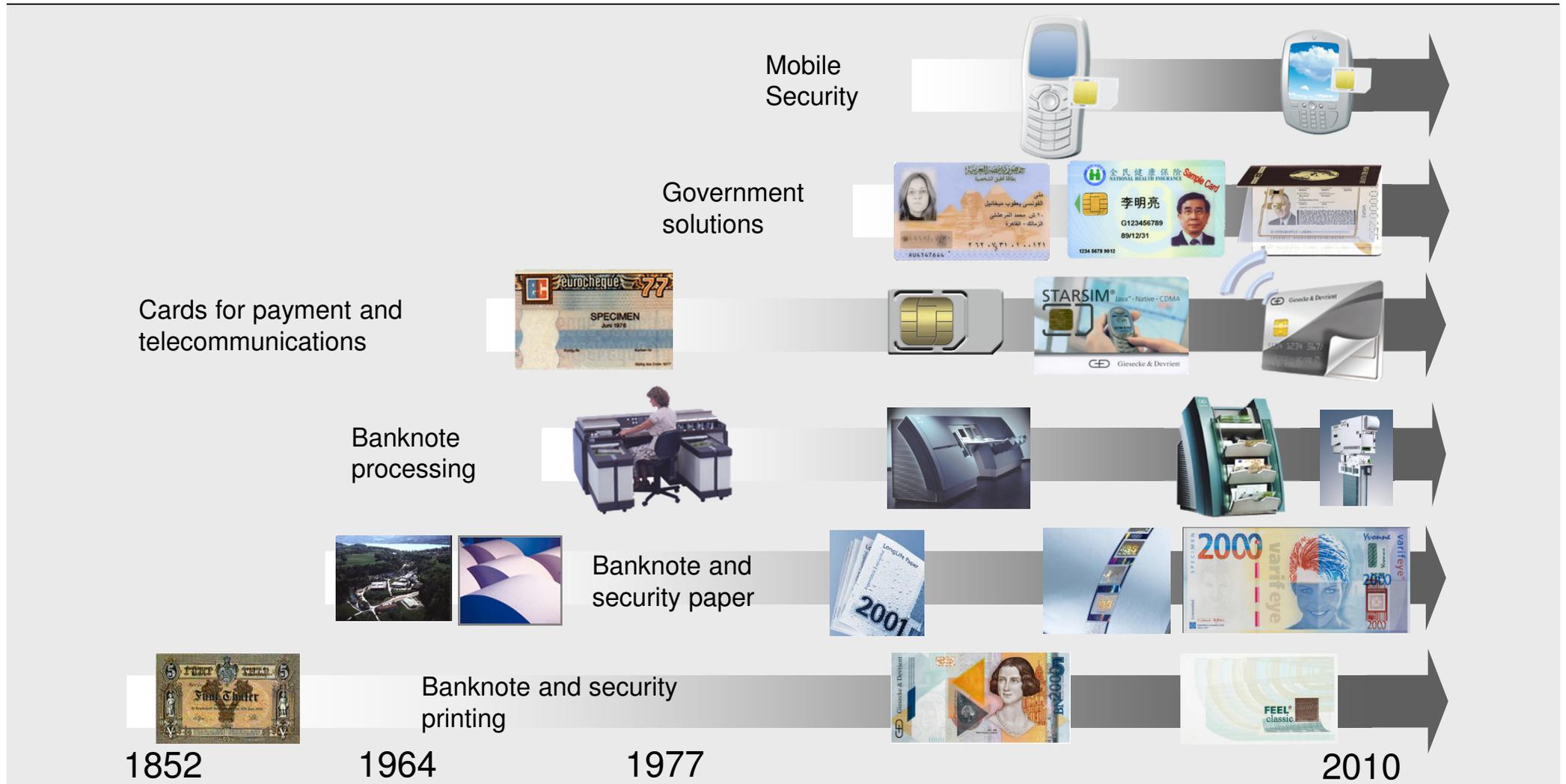


Giesecke & Devrient
Creating Confidence.

Agenda

- **G&D at a glance...**
- **The development of mobile communication**
 - **From voice to Services... and beyond**
- **Attack scenarios**
- **The „Trust Model“ concept**
 - **SE, TSM, TEE**
- **The challenge with the ecosystem**

Giesecke & Devrient — From Printing Banknotes to High-Tech Security Solutions



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The Mobile phone will become *trusted* personal device

Mobile phone has become one of the essentials people have always with them

Mobile devices continue to evolve and will play a central role in people's life



Mobile phones will become *trusted* personal devices

Traditional cards (payment, loyalty, transit, access, ...) as well as user-IDs, passwords and keys are securely stored and processed in the Secure Element of the mobile phone

NFC plays a key role in this evolution

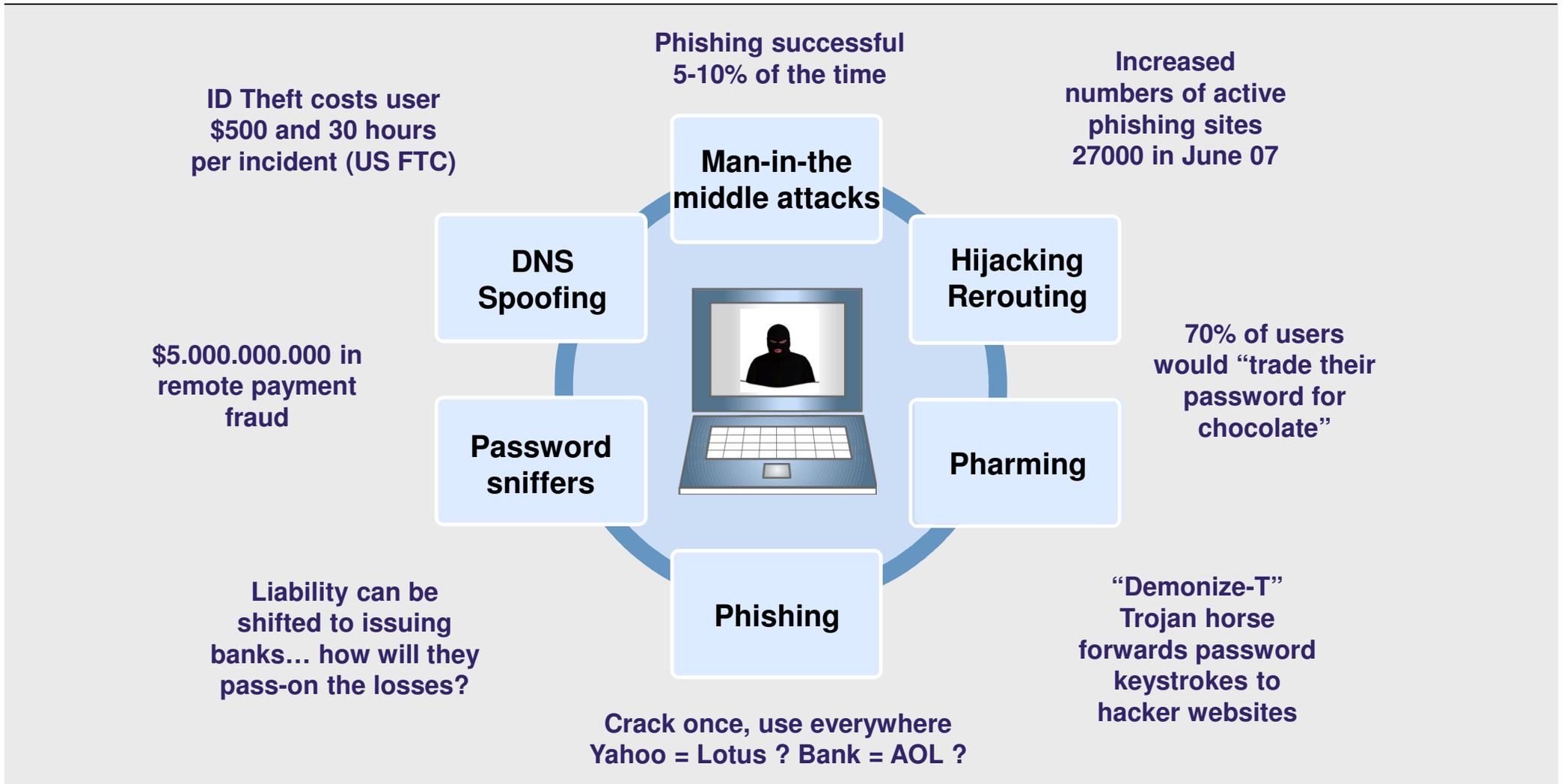
Trend: Convergence of daily life security applications



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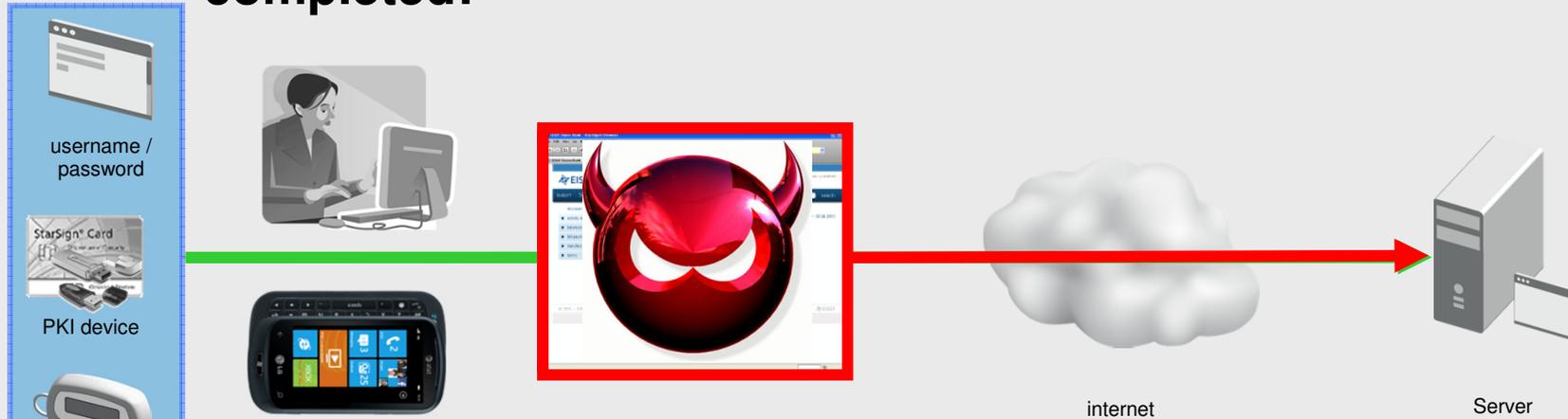
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Dramatic increase of Threats while using the Internet



The Development of Threats

New attacks simply wait until authentication process has been completed:



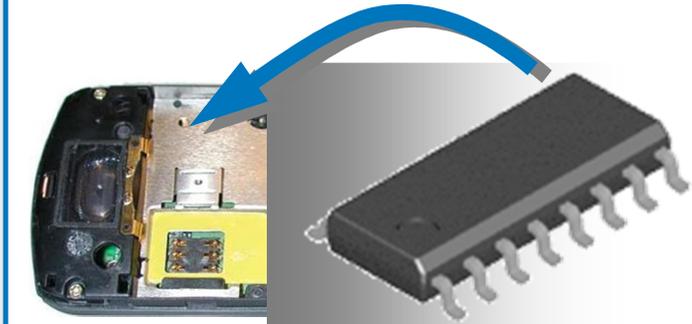
- The application / the browser is the new target:
 - Malware infects the browser/app (exploiting default interfaces)
 - After the authentication the malware takes control of the browser and performs own operations in the name of the legitimate user
 - The malware displays to the user what he expects to see, not what is really happening

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The need for a Trusted Execution Environment (TEE)

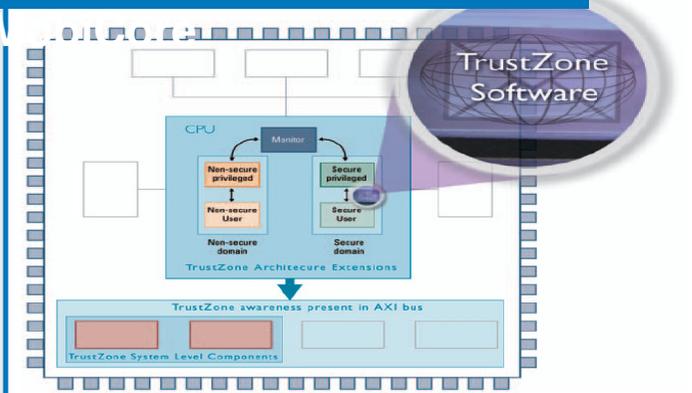
Embedded SE



Removable SE



TEE: TrustZone &



SE = Secure Element

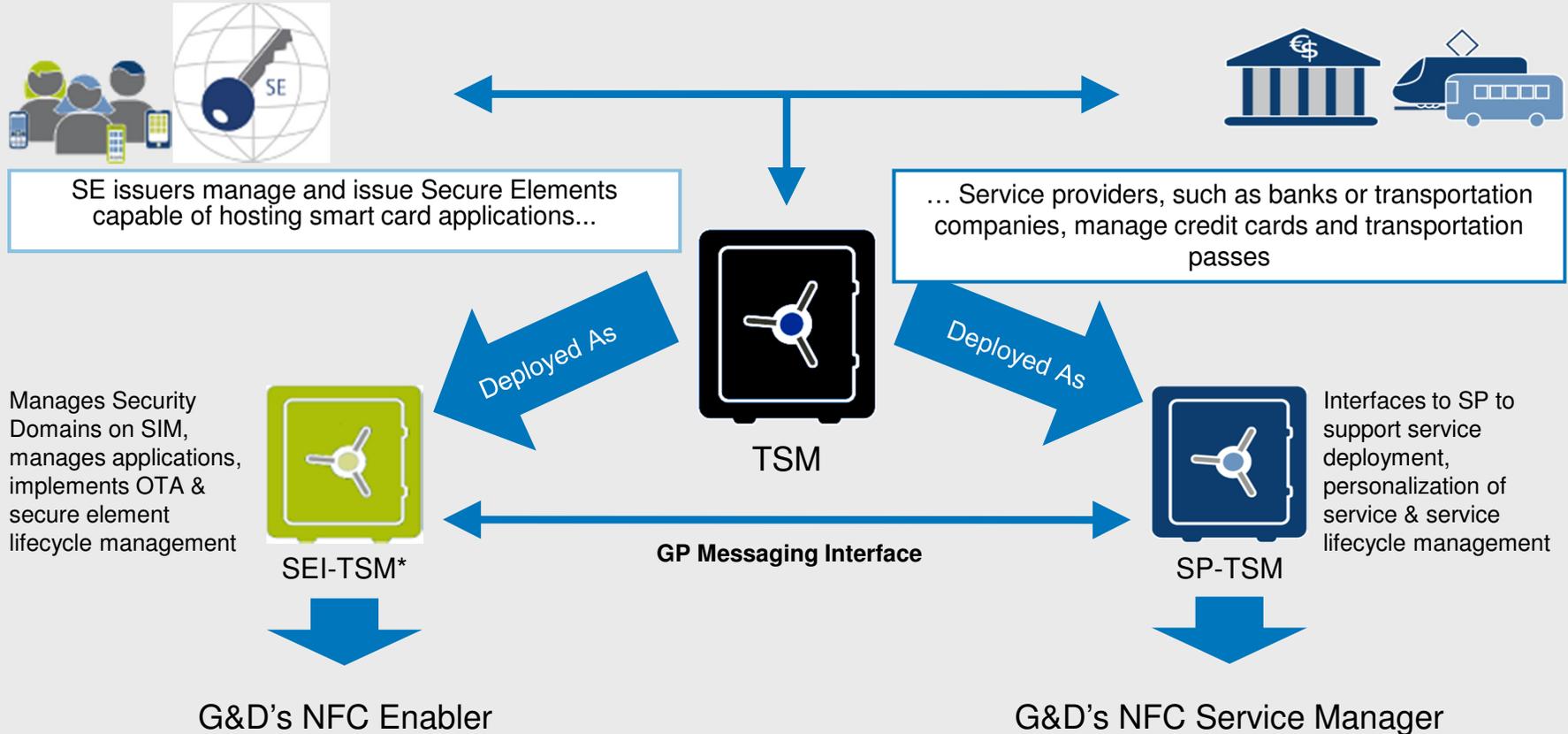


SIM-based SE



NFC Ecosystem: Service Provider and SEI

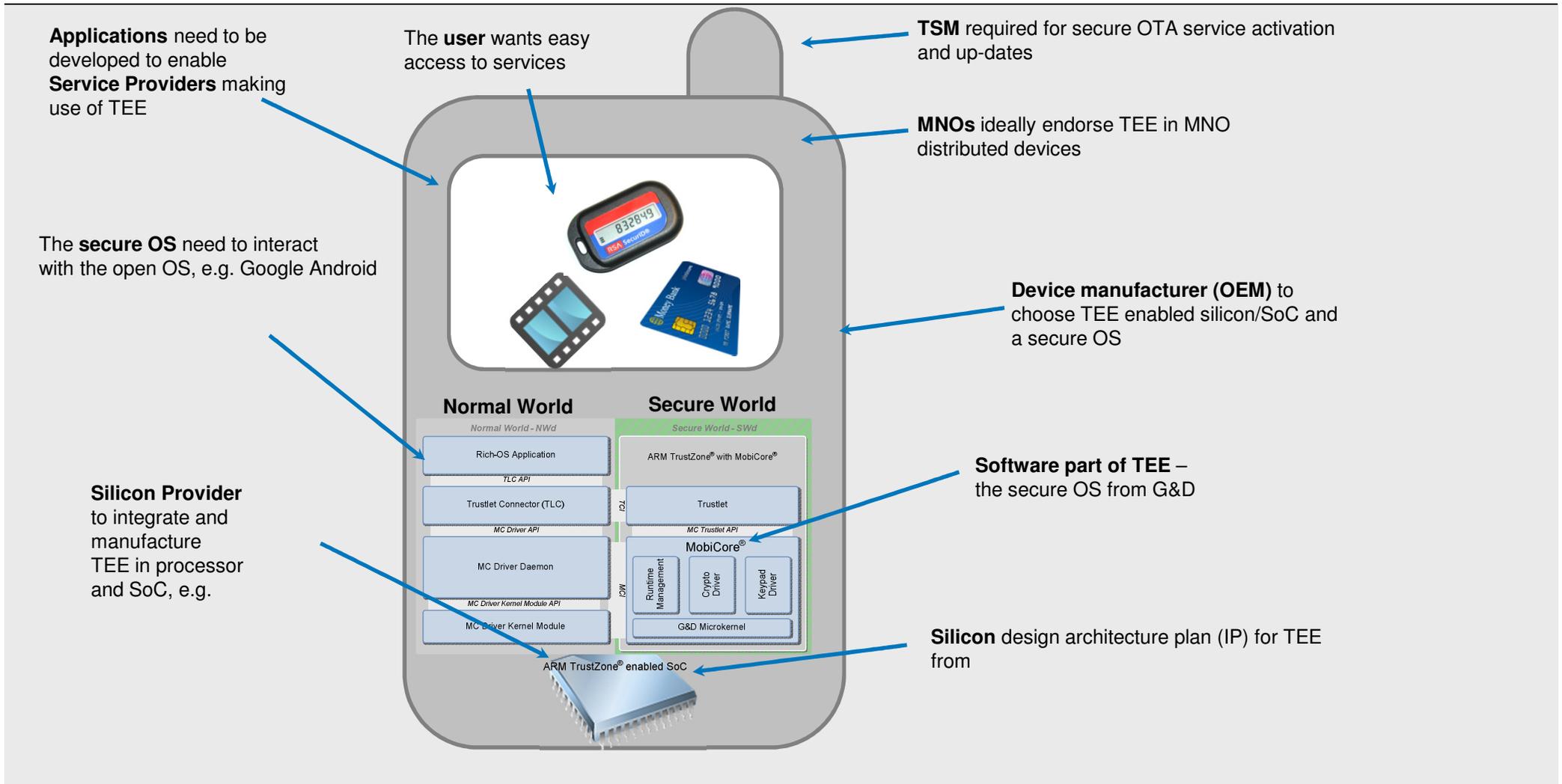
To deploy and manage NFC applications without compromising user's sensitive data ...



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The Eco-System behind a TEE Implementation



Thank You

