



Electronic Licensing Solutions For The Internet Era

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License management

- so what *can* we do, and what *should* we do?

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Dominic Haigh...

- VP Business Development for Agilis since 2003
- Many published articles and white papers
- Prior experience:
 - VP Marketing at a profitability analysis startup
 - Business Unit Manager at Teradyne
 - Product Manager at Teradyne (7 years)
 - Sales manager in the UK
- Degree in physics from Cambridge, and an MBA from INSEAD
- Amateur drummer, racing sailor, motorbike mechanic, gardener...

About Agilis Software

- 6 year-old California company focused on developing and marketing license management solutions
- A clean-sheet approach to software licensing:
 - Internet, WANs, VPNs, firewalls, proxy servers are ubiquitous
 - Reliable network connectivity cannot be assumed
 - Selected standards for deployability, portability and interoperability (HTTP, RDBMS, XML, Web Services, J2EE, ANSI C/C++, Java)
 - Watchwords: developer/end-user ease-of-use, flexibility, extensibility, scalability, openness, cost of operations/support, license lifecycle management
- Worldwide customer base:
 - Customers include leading software / hardware vendors in Finance, Defense, Networking, Semiconductor and other industries.
- Customer deployments in the most demanding environments:
 - US and other defense forces, leading international financial institutions, US federal security agencies, ...
- Four complementary license management solutions:
 - Orion Network Licensing Platform, began shipping 2003
 - Acropolis On-Demand Managed Licensing Service, available now
 - Acropolis Integration Manager, in beta
 - EasyLicenser License Manager, began shipping 2002

Increasing sophistication of license management

The Stone Age

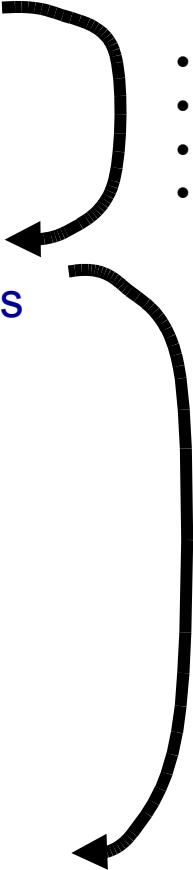
- Paper-based, with audits
- Dongles

The Iron Age

- Node-locked, single user licenses
- Site licenses
- Floating or concurrent licensing
- License controls:
 - Perpetual license
 - Trial licenses
 - Subscription licenses
 - Feature or module-based

The Internet Age

??

- 
- Counter piracy, 'honest abuse'
 - More pricing options
 - Cut operations costs
 - User convenience

- Automation
- User convenience
- Worldwide customer base
- Cut operations/support costs
- More pricing models

What do the internet and modern technology bring to license management?

Automation

- Automated activation of node-locked licenses; scalable to millions
 - No dongles, no need for users to send system info to the vendor, error-free
- User self-service activation of node-locked licenses on disconnected systems
- Back-office integration – automatically configure licenses and issue email instructions to users on order approval
- Manage support agreements

User Convenience

- Many different license models
 - Match available budget
 - Lower user risk
 - Tap into the operating vs. capital budget
 - Serve 'long tail' users
- Automatic fulfillment and activation 24x7 worldwide
- User self-service license relocation (“License to me”), user briefcase
- User admin of their licenses, even for hosted licensing

What do the internet and modern technology bring to license management?

New License Models

- Highly-secure and convenient node-locked licensing (& no dongles)
- Internet-hosted floating licensing
- Practical subscription and usage-based licensing *
- High-margin upgrade/upsell business
- Revocable licenses
- Complex-feature-based licensing

Lower Costs

- No operations support required for node-locked licenses – and no shipping
- One licensing system to support many different license models
- Manage licensing via resellers, VARs, OEMs
- Hosted licensing solutions; no vendor infrastructure required

Business Intelligence

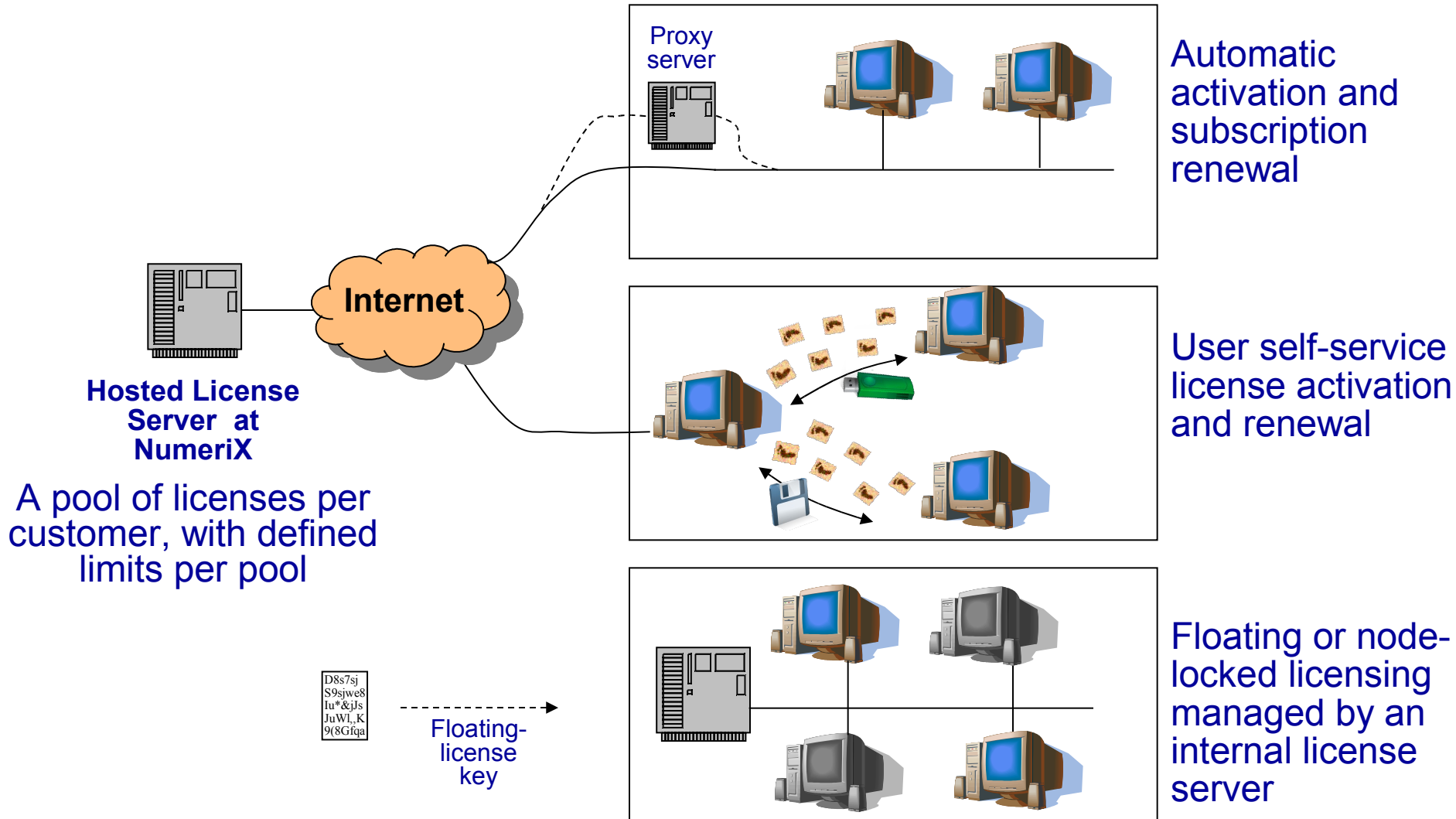
- Licensing data captured in an RDBMS; online and offline reporting / alerts
- Notification of pending license expiration
- Capture data from users

* See: <http://agilis-sw.com/pdf/SSRN-id1088570.pdf>

NumeriX licensing requirements

- Pricing management software sold to banks
- Several hundred customer companies in 25 countries, with up to 100 users per customer
- Subscription-based pricing
- 8 modules, each with 4 to 15 features = ~50 options
- A range of connectivity from their customers' systems:
 - Internet connection from licensed system
 - No internet connection; browser available
 - Not even browser access

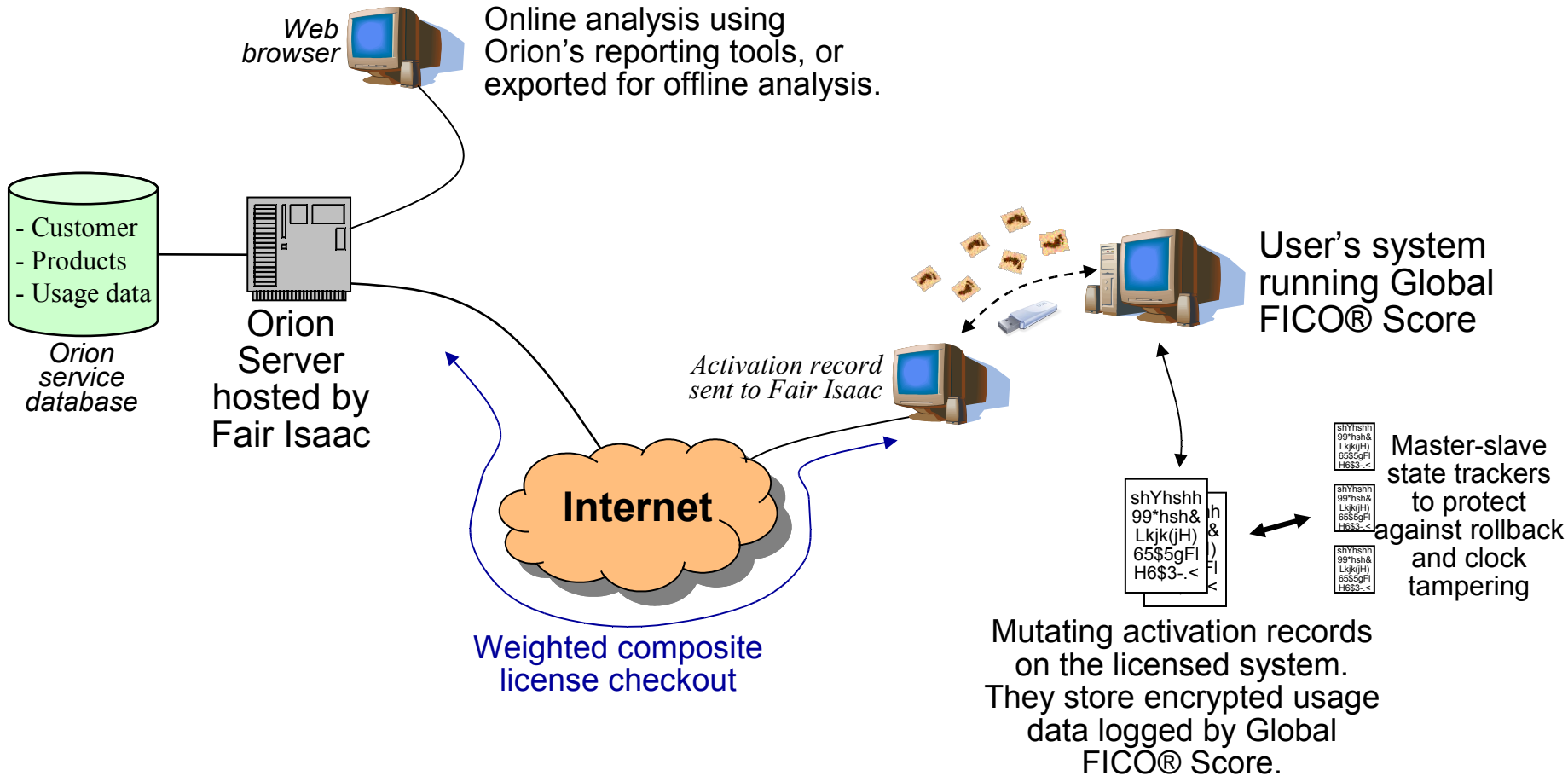
NumeriX implementation – 3 scenarios, one licensing system



Fair Isaac requirements

- Risk analysis tools used by agencies worldwide
- Usage-based renewable license, with post-facto billing (security!)
- Several usage counters per installation
- No internet connectivity from the users' systems
- Users are not IT experts

Fair Isaac implementation



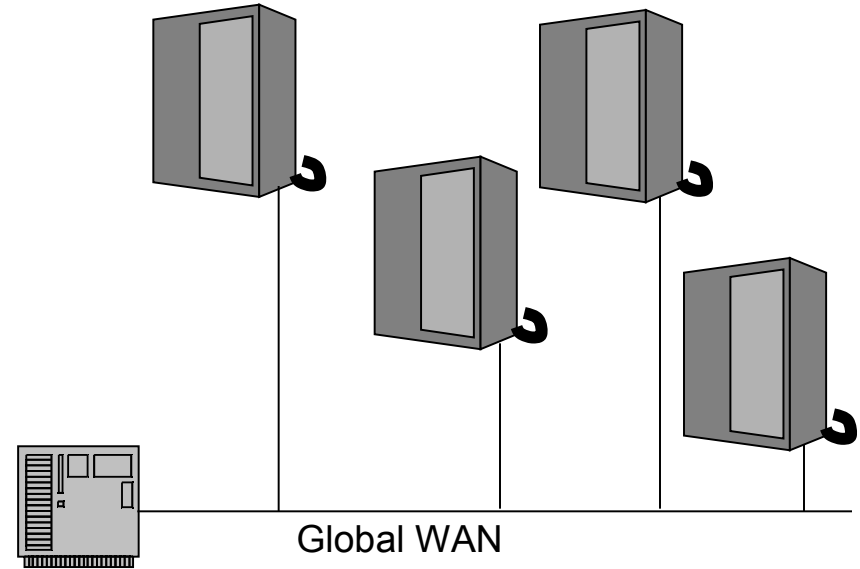
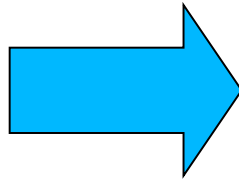
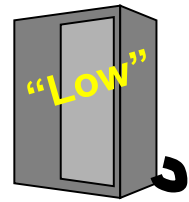
Scenario for a manufacturer of complex systems

- Large, high-cost manufacturing systems with many hardware options (e.g. memory, number of channels, high-performance hardware, power...)
- Most customers have many systems worldwide
- Customer's desired configuration of each system can vary over time
- Ever-lower hardware costs

How to:

- Reduce operations costs
- Allow customers the flexibility they want – maybe achieve a competitive edge?
- Cut support and upgrade costs?

Implementation



License server

- Use of different functions requires a number of “points”
- Systems check out points from a pool managed by the license server

Manufacture Low,
Medium and High spec
machines only

Manufacturer

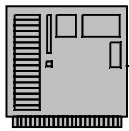
Customer

Mobile technology startup requirements

- Enterprise server application
- License based on number of servers and number of seats per server
- Perpetual and subscription licenses
- Revocable licenses
- Easy way to upgrade a customer's number of servers or seats
- Minimal infrastructure investment and management
- Rapid startup

Implementation

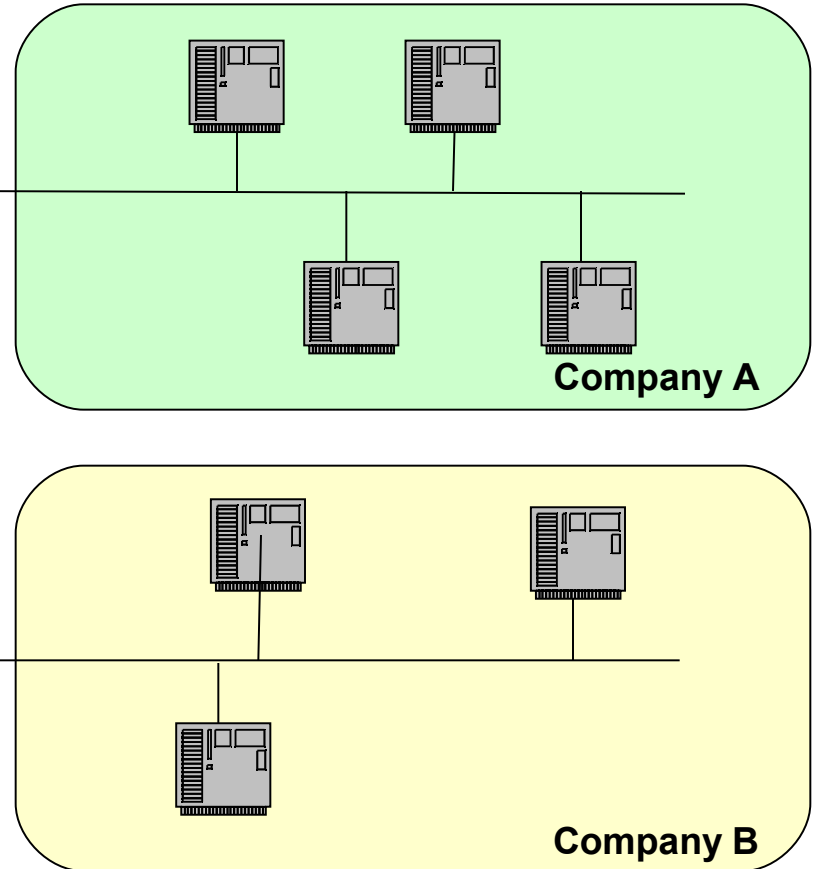
4 licenses for Company A
3 licenses for Company B
.....



Internet

**On-demand
Managed Licensing
Service**

- Licenses are re-validated automatically every month
- Each server works autonomously within its license limits between re-validations
- Any new license limits automatically take effect at re-validation
- A license can be revoked by cancelling it in the license server (from any web browser)



So what should / do?

No idea – but you have more and better options than ever before.

Things to think about:

- Business strategy
- Customers' preferred usage and buying patterns
- Mature versus new markets
- Domestic versus overseas, especially piracy-prone areas
- Competitors' approaches
- Expected annual volume of licenses
- Back-office automation options and requirements
- Application technology (platforms / programming languages required)
- Product roadmap
- Incremental roll-out strategy vs. “throw the switch” e.g. Complement - Supplement - Replace

A possible transition strategy

Incremental risk-managed approach: Complement – Supplement – Replace:

1. Complement existing licensing system

- Add automated key delivery to the legacy licensing system using a hosted solution
- Automate delivering node-locked licenses
- No changes required to the legacy-protected applications
- Improve user service, operations overhead, alerts, tracking, reporting....

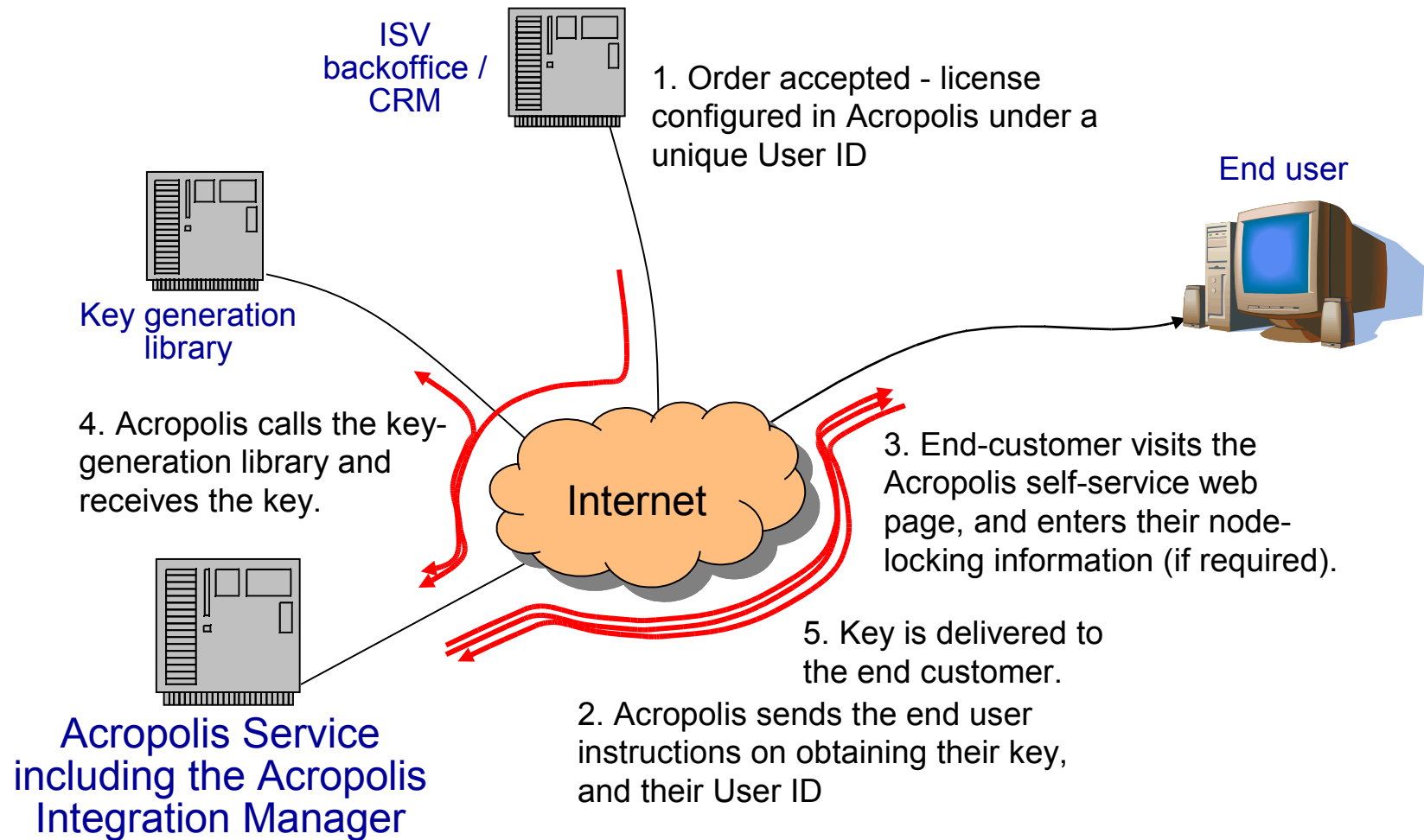
2. Supplement existing licensing system

- Extend existing licensing semantics
- Add software rental licensing capabilities
- Add unified product activation / floating licensing capabilities with single integration.
- Application can auto-detect available licensing system and adapt.

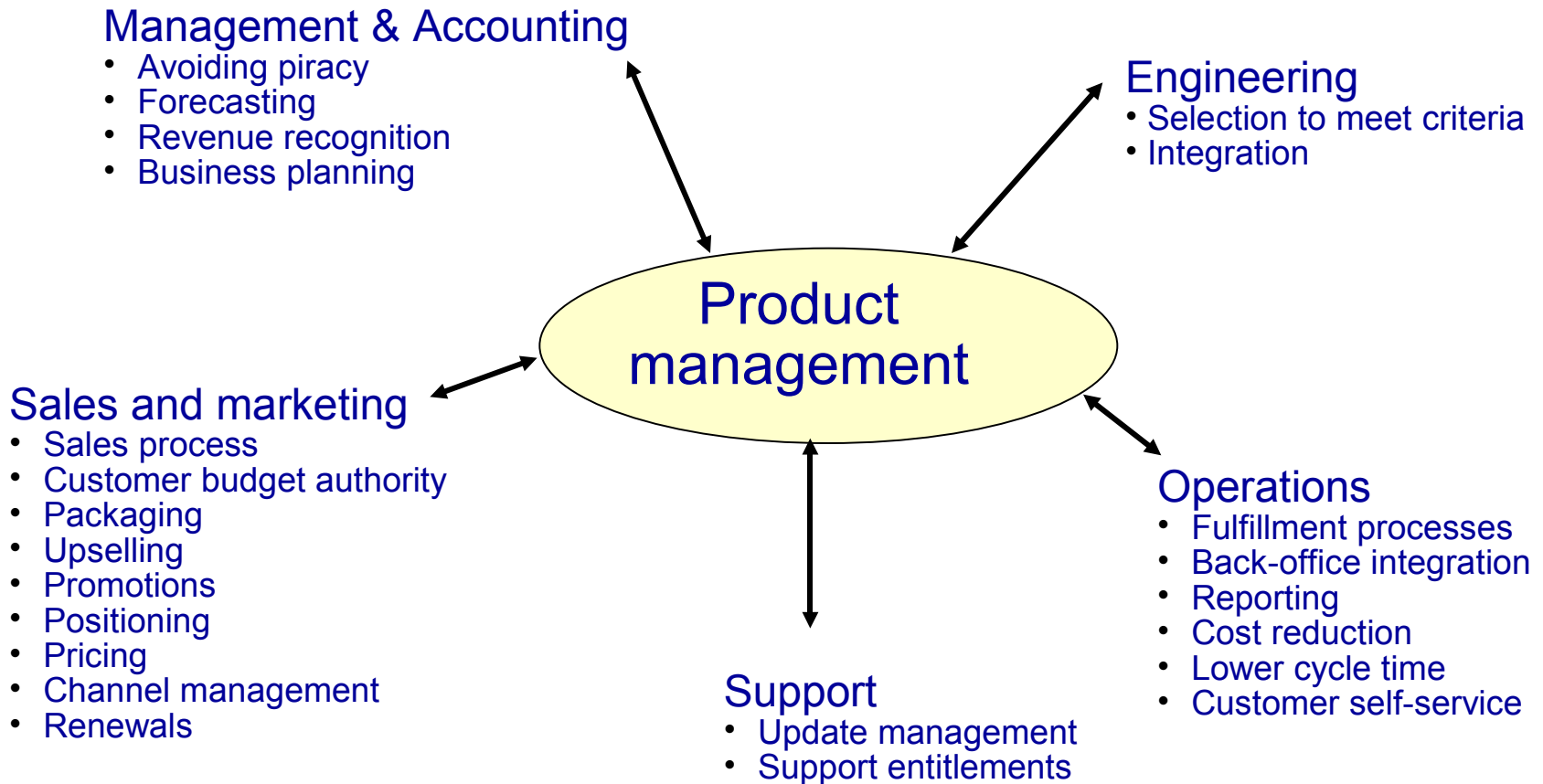
3. Replace existing licensing system

- Once the new system is fully operational and proven, the legacy licensing system can be jettisoned.
- Legacy licensing system is decommissioned simply by turning it off.

Deferred key generation for legacy licensing systems



All departments are involved in a licensing implementation





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Discussion

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