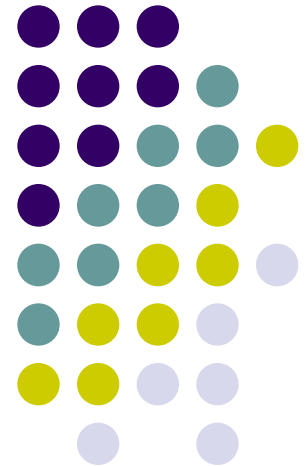
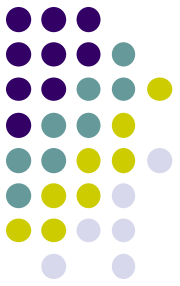


Open Source: Developing Country & Future

Presentation: Ass.Prof.Dr. Vu Thanh Nguyen
Msc. Nguyễn Công Hoan

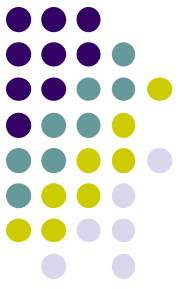




Content

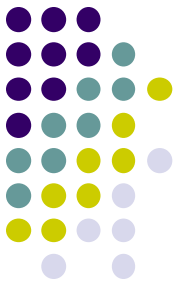
- Open Source for developing country
- Open Source for IT future

Open Source for Developing Country



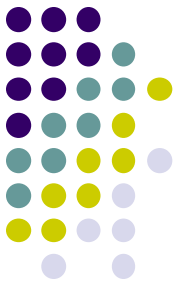
- Free/Libre/Open Source Software (FLOSS)
- “FLOSS” is everywhere, the Internet depends on it
- Every PC running *Microsoft Windows* includes open source components for networking – TCP/IP, the basic internet protocol; to access domain names...
- This model maintains some of the most important, innovative technologies today

Open source develops local skills



- 70% of developers participate in the FLOSS community “to learn and develop new skills”
- 67% of developers participate in the FLOSS community “to share ... knowledge and skills”
- 30% of developers participate in the FLOSS community “to improve ... job opportunities”
- Over 50% of developers derive income, directly or indirectly, through their participation in the FLOSS community

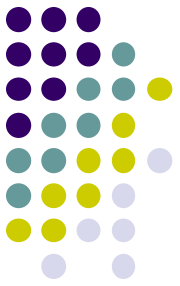
Source: Free/Libre/Open Source Software (FLOSS) Study of Developers



... and local businesses

- Immediate customer base – local businesses are an obvious choice for integration, maintenance and support, no single vendor in control
- Low (no) entry barriers : any local businesses *can provide* support for any open source software

S/w licensing costs seem low...



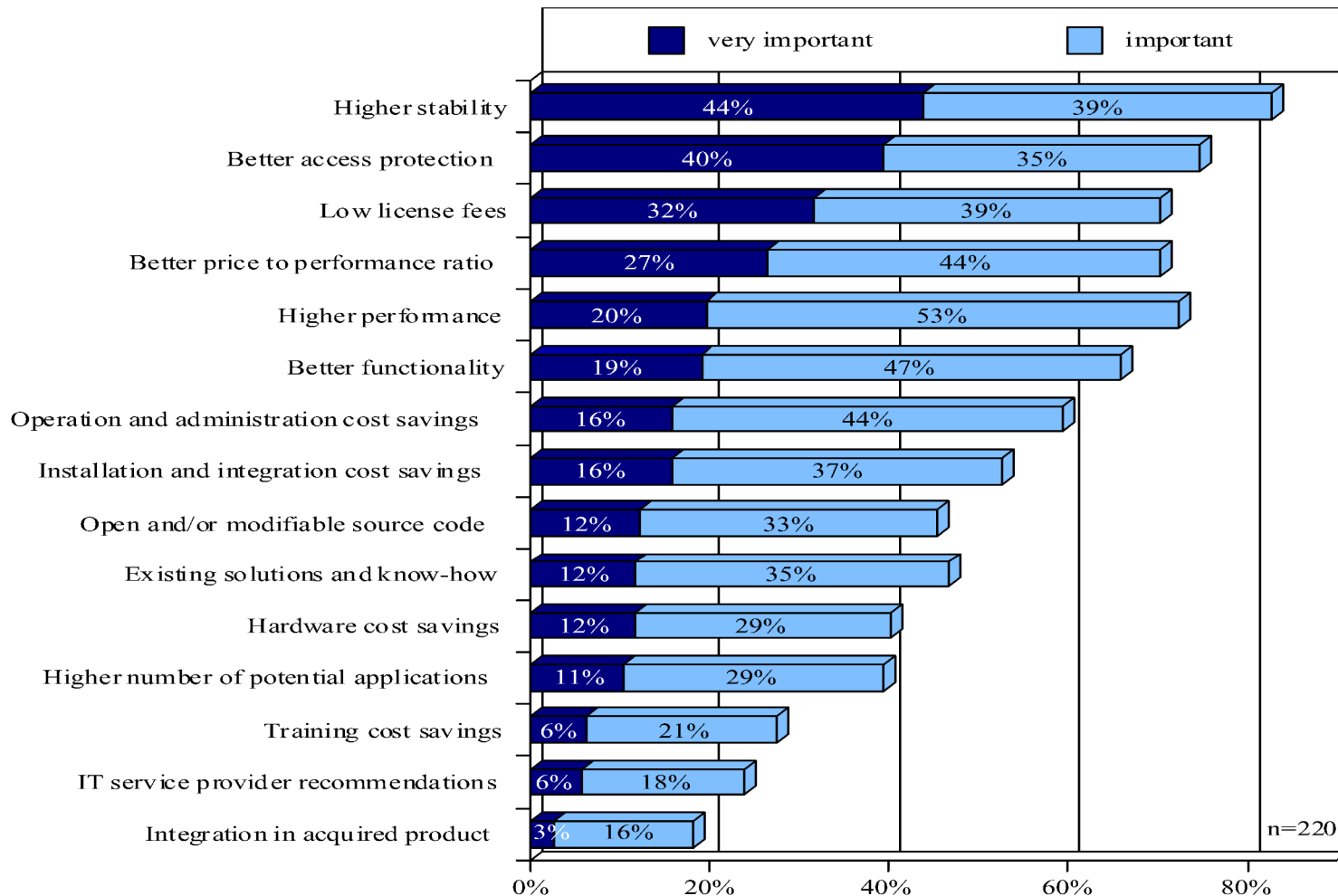
Licensing Cost of Windows Vista + Office 2007 (USA)

- Standard Version \$500*
- Professional Version \$800*

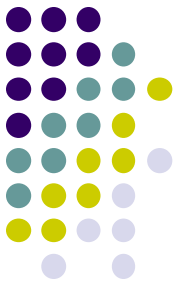
**Prices from Amazon.com*



...and not the #1 reason for F/OSS



Berlecon Research 2002



But in developing countries...

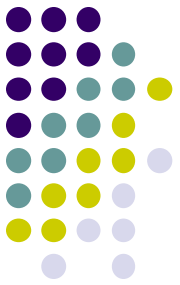
Licensing Cost of Windows Vista + Office 2007 (USA):

- Standard Version \$500 (USD)
- Professional Version \$800 (USD)

VIETNAM: GDP per capita \$1000 (USD) p.a.

Effective cost of Windows Vista + Office 2007 (per capita)

- Standard Version 6 months' GDP
- Professional Version 10 months' GDP



...Cost really DOES matter

Licensing Cost of Windows Vista + Office 2007

- Standard Version \$500
- Professional Version \$800

VIETNAM: GDP per capita \$1000 p.a.

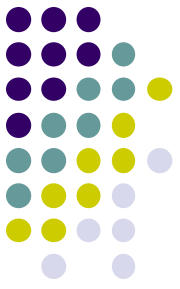
Effective cost of Windows Vista + Office 2007 (per capita)

- Standard Version 06 months' GDP
- Professional Version 10 months' GDP

PPP\$ - comparing with US GDP per capita: \$41.270 p.a.

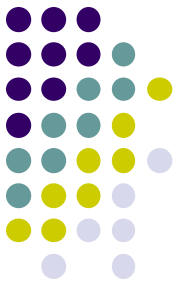
Effective cost in PPP\$ for Windows Vista + Office 2007 in Vietnam

- Standard Version \$20.635
- Professional Version \$34.392



Open source is the best way for developing countries to:

- Deploy ICT *rapidly, affordably, widely*
- Develop an ICT infrastructure, limiting “software piracy”
- Develop a *local* ICT software and services skills base and foster a *local* ICT software and services economy
- Truly use ICT as an enabler for *widespread* economic growth

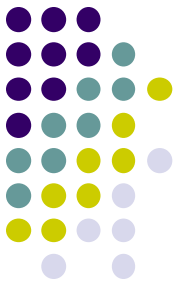


More information...

The FLOSS project pages & final report

<http://flossproject.org>

Open Source: The Future of Software

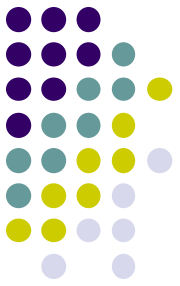


Commercial Software

- Closely held intellectual property
- Bundled offering: explicit or implicit
- Active Vendor, Passive Customer
- Key Challenge: Selecting right vendor
- Key Issue: Signing right contract

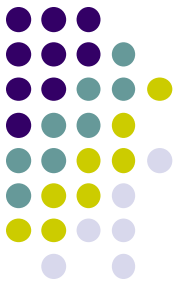
Open Source Software

- Widely shared intellectual property
- Unbundled offering due to OS economics
- Active Customer, Passive Vendor
- Key Challenge: Selecting right product
- Key Issue: Assessing product maturity

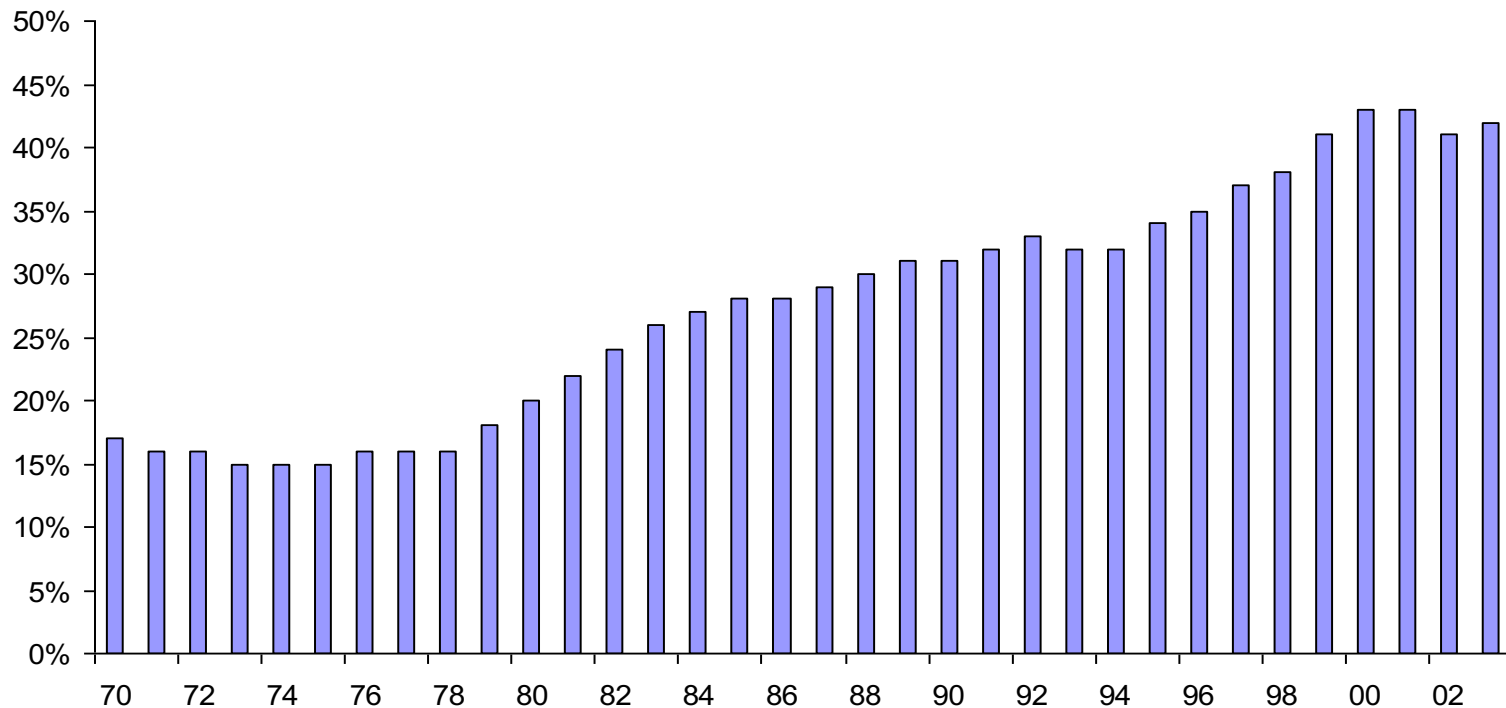


Trend #1: IT Budgets Drive Open Source Adoption

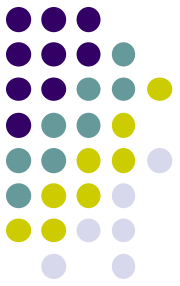
IT Budget Trend Over Past 30 Years



**Information Technology as Percentage of Equipment and Software Capital Investment
1970 - 2003**



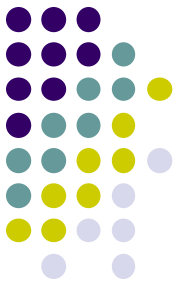
Source: Bureau of Economic Analysis



Future IT Budget Predictions

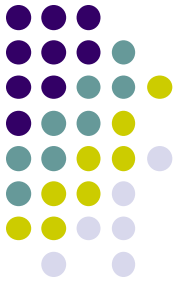
- IT budgets will grow at no more than GDP expansion: 2 – 4% per year
- Demand for IT will continue to grow: WLAN ...
- Corporate Management wants business functionality from IT
- IT budgets are a zero-sum game, so ...

Future IT Budget Predictions



IT MUST find a way to shift costs within software infrastructure

- Commodity infrastructure shifts to open source
- Investment focuses on business ROI (return of investment) (see investment formula ROI)
- Innovation moves to the edge



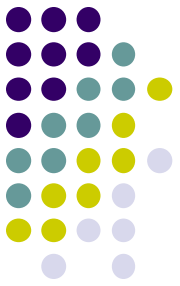
Trend #2: Commercial Software Companies Look Like Open Source

The Future of the Commercial Software Industry



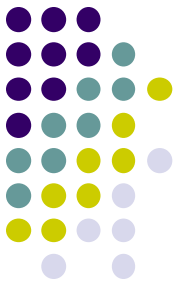
- Some recent events in commercial software
 - May, 2004: Cost reductions come to the software industry

The Future of the Commercial Software Industry



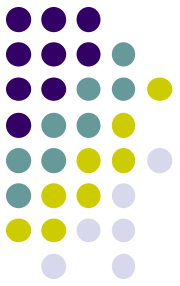
- Some recent events in commercial software
 - June, 2004: Oracle/PeopleSoft Antitrust Trial
 - **“Oracle offered discounts of up to 90% as a way to compete with rivals.”**

The Future of the Commercial Software Industry

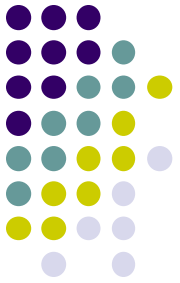


- The Question:
 - “Will software be a business that generates a lot of profit in the future? Is open source essentially a disruption that will cause the software business to be less profitable?”

The Future of the Commercial Software Industry

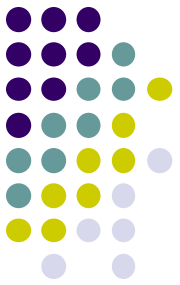


- Much lower margins
- Obvious gains: cheaper software
- Some not-so-obvious losses: free services, advertising, white papers, sales engineer visits, analyst coverage
- Commercial software increasingly will be an unbundled offering like open source
- Implication: You will take on more integration responsibility



Trend #3: Competitors Drive You to Open Source

Examples From History: Automobiles 1900 – 1920

A red vintage car with a black top, parked on a paved surface with trees in the background. The car is a four-wheeled model with large spoked wheels and a high seat. It is shown from a side profile, facing left. The background is a lush green lawn with several trees.

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Model M in 1907—a
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OF VALUE

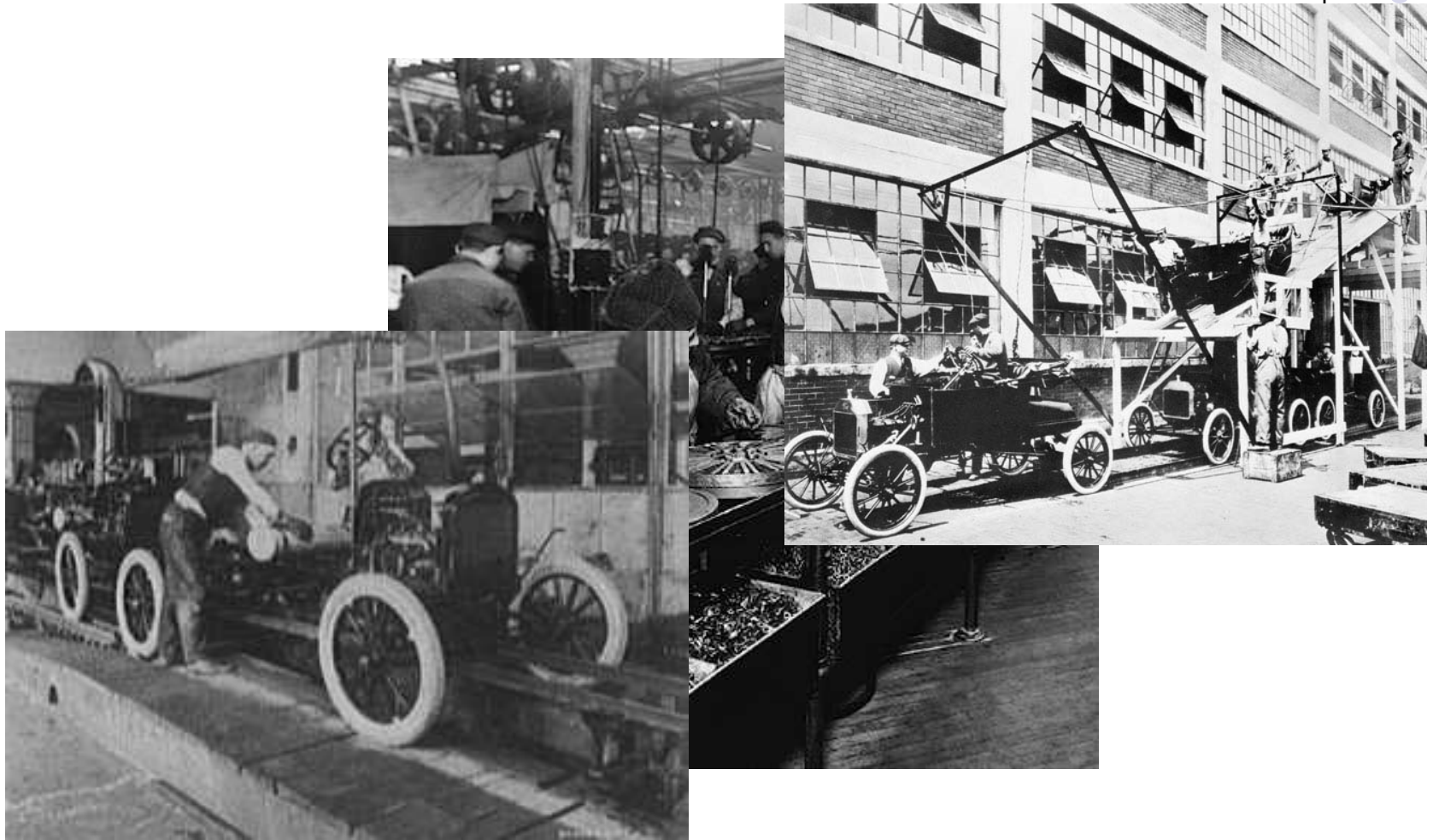
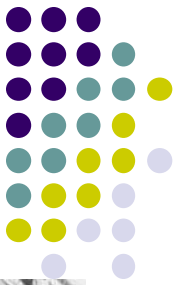
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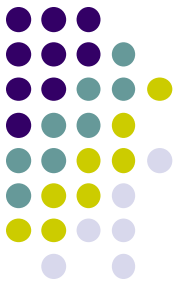
rive.
P.
Dept. E, for Catalogue
CAR CO.,
Cleveland, Ohio.

Landaulettes, 24 to 60 H. P., 4 and 6 Cylinder.
The GEORGE N. PIERCE COMPANY (Buffalo, N.Y.) BUFFALO, N.Y.

1913: Ford Invents the Assembly Line



The PC Industry



1980s



COMPUSA.com



NAVICA

Manufacturer

Distributor

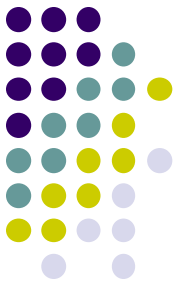
End user

1990s



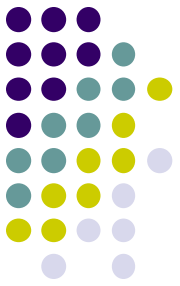
NAVICA

Example: Open Source Case Study #1



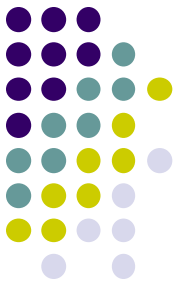
- Merrill Lynch SOA
 - Goal: Make data from legacy systems available to new customer-facing applications
 - **Original Solution:** proprietary EAI product, budget \$800K
 - New Solution: Open Source Web Services
 - **Final Budget:** \$30K, 4% of original budget

Example: Open Source Case Study #2



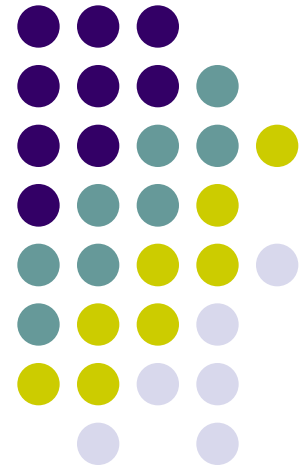
- QuinStreet
 - QuinStreet: Online Direct Marketer
 - J2EE-based application infrastructure
 - **Original Solution**: upgrade to latest WebLogic: \$500K license, \$75K mtc/year
 - New Solution: Migrate to JBoss
 - **Final Budget**: \$0 license, \$50K mtc/year

Example: Open Source Case Study #3

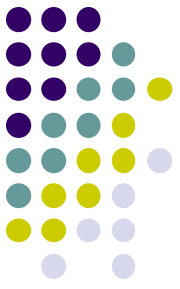


- Sabre Holdings
 - Goal: Better understand online booking patterns by creating 1.2 Tb Data Warehouse
 - **Original Solution**: proprietary DW software, budget \$500K
 - New Solution: Create DW with MySQL
 - **Final Budget**: \$50K HW/\$0 license

Recommendations

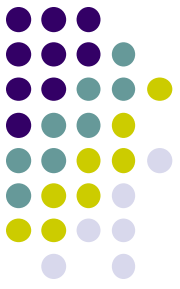


Running IT in an Open Source World

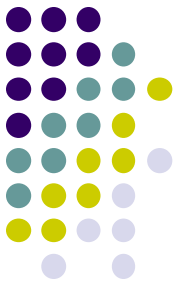


- Plan for a steady-state, zero-sum world
 - Shift investment from infrastructure to business functions
- Examine vendor portfolio
 - Trim vendor list
 - Stick with leaders, avoid second-tier and startup vendors
 - Share info with peers to gain negotiating leverage

Running IT in an Open Source World



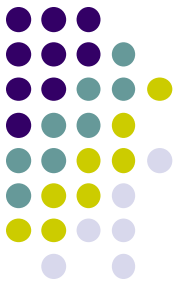
- Recognize that open source will transform competition
 - Plan for unbundled world
 - Seek open source pilot projects
 - Jump before you're jumped



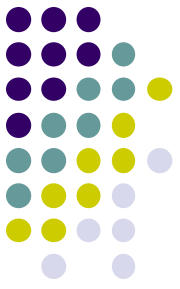
More Resources

- SearchEnterpriseLinux.com
- *Succeeding with Open Source*, Bernard Golden, published by Addison-Wesley
- View “Open Source Beyond Linux” Webcast on [SeachEnterpriseLinux](http://SearchEnterpriseLinux)

Recent Open-Source Developments

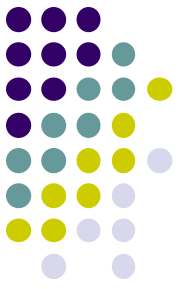


- Mah Police tender: 1,500 PCs running Linux with Devnagari
- Indian govt (CDAC, NCST) release Linux in 5 languages
- Red Hat revenues up 36% last quarter; profitable
- Sun releases Java Desktop System
- Virus fear could hurt Windows (WSJ headline)
- Novell buys Ximian
- China, Korea, Japan working on open-source Asian OS
- Brazil recommends Linux in government
- Munich shifts 14,000 desktops to Linux
- Nutch: an open-source search engine under development
- Chandler: next-generation PIM (Mitch Kapor)
- Lindows PCs for USD 169-199



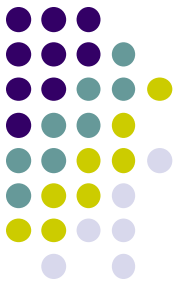
Information Flow

- Open-Source Usage and Experience
- Open-Source as Business
- Open-Source in India
- Open-Source and Affordable Computing
- Opportunity: SME Market
- Open-Source Project Ideas



Experience *Open-Source Everywhere!*

- Linux/Open-Source offers more than cost savings
 - Freedom, Flexibility; Platform to build a business on
 - Set of commodity software components that can be put together for different purposes
- Open-Source Software is more than Linux
 - Sendmail, Apache, MySQL, PostgreSQL, LTSP
 - JBoss, SQL-Ledger, OpenCRM, SpamAssassin
 - Evolution, OpenOffice, Mozilla, KDE/Gnome, GAIM



In Office - *Linux Desktops*

- Linux on the desktop is a reality
 - Email, Web Browser, Office Suite, IM Client, PDF Reader/Writer, File Manager
- Server-centric computing
 - Thin Clients (old, low-cost PCs) with Thick Server
 - Simplified Administration
 - OpenOffice can read/write MS-Office file formats
 - Virus-free, spam-free environment!



Open-Source as Business

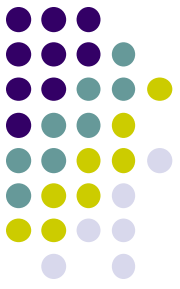
- Open-Source as the operating platform
 - eBay, Amazon, Yahoo, Google
- Open-Source products, solutions and support
 - IBM, HP, Dell, Red Hat, Suse, Sun
 - MySQL, JBoss Group, Codeweaver
 - Six Apart (MovableType and TypePad)
- Open-Source ancillary services
 - Lindows (hardware integration, software subs.)
 - O'Reilly (books and conferences)



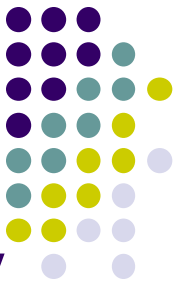
OSS and Affordable Computing

- Opportunity to build the next computing platform
- Disruptive Innovations for the next users
 - SMEs, Individuals / Families in Emerging Markets, Rural
 - Focus not on competition, but non-consumption
 - R&D Costs have to be minimal
 - Lag hardware by one generation; use latest software
 - From India to other emerging markets
- Low-Cost Computers
- Server-centric Computing
- Linux and Open-Source Software
- Localisation (Language Support)
- Remote Server Management

Opportunity: SME (Small & Medium Enterprise) Problem Statement



- SMEs are caught in two traps: technology and marketing
- Computing is still expensive
- Business benefits of using technology are still not clear to most SMEs
- As a result, SMEs use very little of computing – hardware and software
- SMEs do not have access to real-time information
- Supporting and managing technology is still a challenge
- There is no easy way to sell software to SMEs
- SMEs find it hard to find other SMEs for tapping business opportunities



Solution Outline: SME Tech Utility

- Demonstrate how connected computers and the Internet can help SME business
- Create/propose a reference IT architecture for enabling intelligent, real-time SMEs
- A connected computer for every employee for less than Rs 500 per month
- Integrated Software Bundles, built around “only handle information once”
- Development platform for ISVs (Independent software vender) to build vertical / local solutions
- Managed services to remotely manage IT at SMEs
- A virtual marketing and connection mechanism for SMEs

7 SME Innovations

Each is an OSS Business Opportunity



- All-In-One Server-Software Solution
- Rs 2,500 Thin Client (Rs 5,000 with monitor)
- New Desktop
- Visual Biz-ic
- Social Network Software
- Information Marketplace
- Software Distribution Network