

***The Costs of NOT doing Business  
with Open Source Technologies  
in Developing Countries***



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# Introduction: Choosing a computer operating system for an entire country demands making macro and micro decisions in one package.

- Hardware
- Software
- Systems
- Support
- Telephonics
- Wireless
- Satellite
- ◆ Home
- ◆ Market
- ◆ Office
- ◆ Treasury
- ◆ The Poor
- ◆ Unreachables
- ◆ Postal Service
- ◆ Tech. Compatibility
- ◆ Intern'l Partners
- ◆ Treaties
- ◆ National Laws
- ◆ Intellectual Property
- ◆ Defense
- ◆ E-Contract(s)

# The Real Costs to E-Governments

## Associated with **Closed Source** Applications:

- ◆ 1. Hierarchical
- ◆ 2. Slow to respond to change
- ◆ 3. Not secure
- ◆ 4. All requests be returned to the CS owner
- ◆ 5. Final decision on which projects to support
- ◆ 6. Monopoly on investment

# Open Source Contributions:

- ◆ On the macro level:
  - ◆ 'Free' to share source code to develop other projects
  - ◆ 'Free' to change
  - ◆ Quick and responsive
  - ◆ Secure
- ◆ On the micro level:
  - ◆ Enables local peoples to create their own e-communities, own commerce
  - ◆ Money from e-commerce stays in the community instead of flowing out of the country

# OpenSource Flexible “Menu”: Software Stack

• **Load Balancer:**



• **HTTP Server:**



• **Application Server:**



• **Content Management Server:**



• **Security Directory:**



• **Personalization Server**



• **Portal Server:**



• **B2B Server:**



• **Integration:**



• **Database:**



• **Systems Management:**



• **Security:** Too many to mention

# Savings: Garden Grove, California

**“By implementing Open Source solutions in place of solutions based on Microsoft software or commercial networking appliances, City staff has saved tax payers at least \$402,901.74 in initial costs as well as \$75,118.99 annually...”**

| Open Source Project          | Initial Savings     | Annual Savings     |
|------------------------------|---------------------|--------------------|
| 1 File/Print Sharing Servers | \$28,920.00         | \$4,714.80         |
| 2 PDC Server                 | \$1,902.40          | \$462.27           |
| 3 Zope Server                | \$59,000.00         | \$8,666.67         |
| 4 Web Server                 | \$3,510.93          | \$692.00           |
| 5 D3 DB Servers              | \$3,804.80          | \$924.53           |
| 6 SQL Database Server        | \$121,067.95        | \$17,497.54        |
| 7 Imaging Server             | \$35,000.00         | \$7,333.33         |
| 8 Mail Server                | \$65,695.76         | \$9,590.58         |
| 9 Anti-Spam                  | \$22,350.00         | \$4,653.93         |
| 10 Backup Server             | \$13,000.00         | \$13,000.00        |
| 11 Remote Software           | \$7,000.00          | \$1,200.00         |
| 12 Firewall Server           | \$5,000.00          | \$3,333.33         |
| 13 Remote Routers            | \$36,650.00         | \$3,050.00         |
| <b>TOTALS</b>                | <b>\$402,901.74</b> | <b>\$75,118.99</b> |

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 Questions or comments? Contact [webmaster](#) - [web policy](#)

[http://www.ci.garden-grove.ca.us/departments/city\\_manager/linuxwpaper\\_html/view](http://www.ci.garden-grove.ca.us/departments/city_manager/linuxwpaper_html/view)



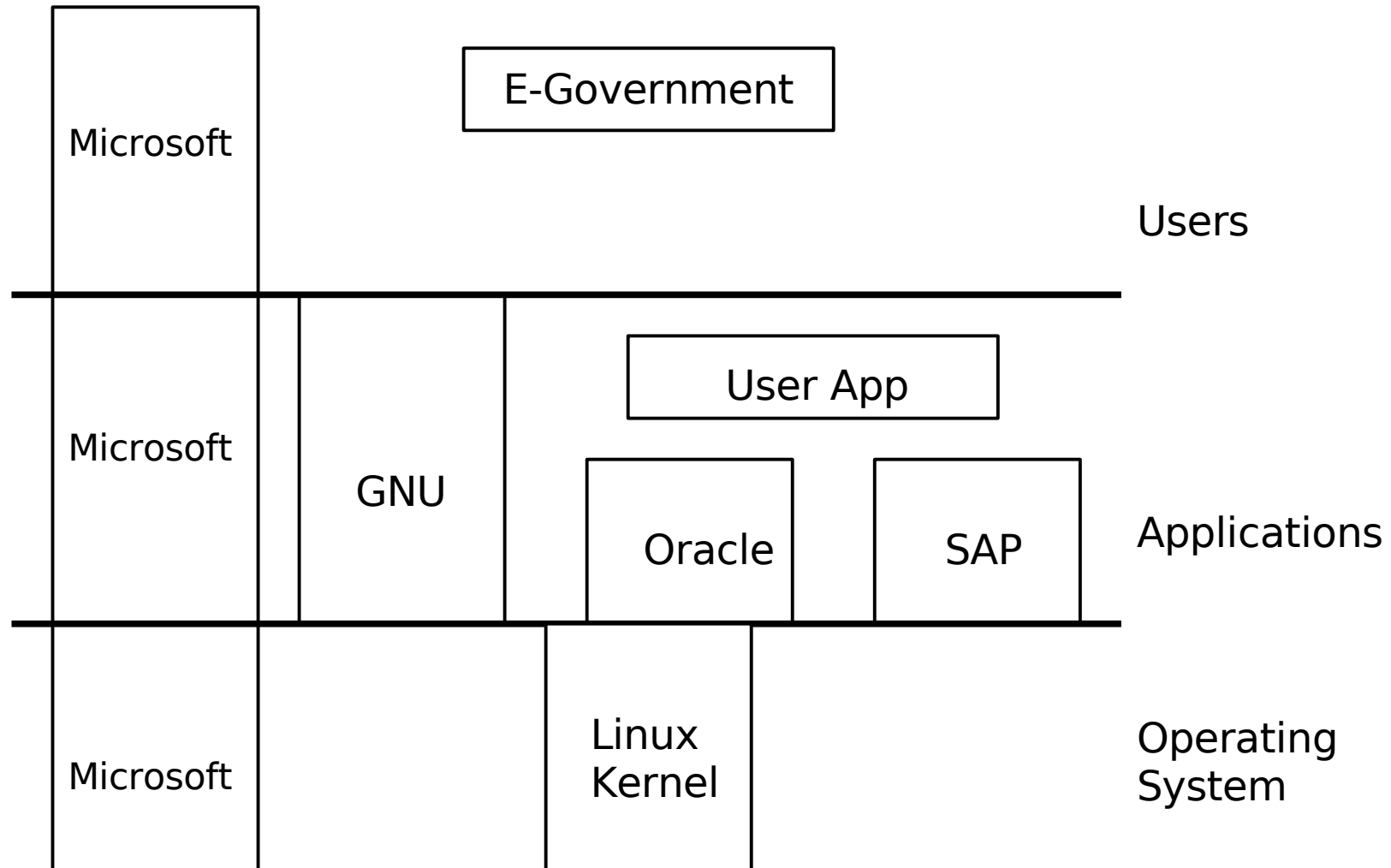
# Value Proposition: OpenSource

- **Choice**
  - ◆ Minimize Lock-in
    - It will still exist
  - ◆ Maximize Hardware platforms
  - ◆ Applications
  - ◆ Suppliers
- **Upgrade Treadmill**
  - ◆ Minimize
- **Hardware**
  - ◆ Life Extension
- **Server Consolidation**
- **Open and De facto standards**
- **RAS<sup>3</sup>**
  - ◆ Reliability
  - ◆ Availability
  - ◆ Serviceability
  - ◆ Security
  - ◆ Scalability
- **Lower cost**
  - ◆ Upfront and Ongoing
  - ◆ TCO/ROI

Slide Courtesy of Art Cannon, IBM

# Security: E-Government

Closed vs Open





# Regional Adoption:

- **Brazil**



- ◆ The Brazilian government created the Implementation Chamber for the Free Software (Câmara de Implementação do Software Livre) to oversee this project.

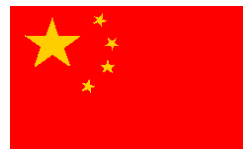
- **Russia**



- **India**



- **China (PRC)**



- ◆ WTO Membership

- ◆ Asianux



- **Korea**



- Asianux

- **Venezuela**



<http://www.venezuelanalysis.com/news.php?newsno=1439>

# Recommendation to Developing Countries, E-Governments

Technology is not the issue:

Government/Client need is the real issue.

If the technology does not meet the requirements,  
it is worthless.

# Etc.

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