Advanced technologies for breakthrough applications

InterSystems Caché

HP OpenVMS Technical Update Days

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InterSystems

InterSystems

- InterSystems was founded in 1978
- It is based in Cambridge (Boston) in Massachusetts (USA)
- It is a privately-owned company
- Growing and profitable throughout its entire history
- Partnership is at the core of its values; this has been its major asset throughout its history

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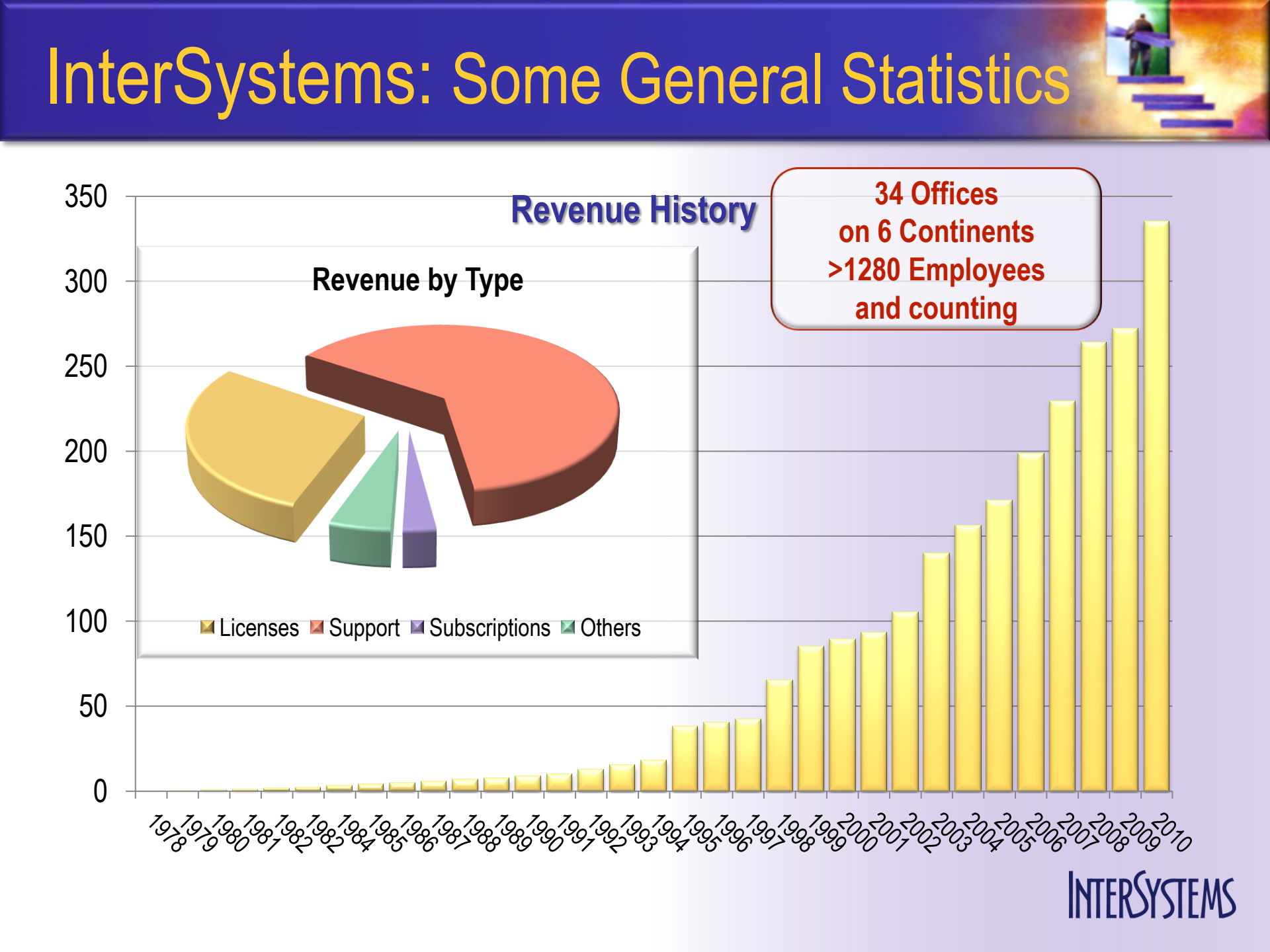
InterSystems: Some General Statistics



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Some history, present & future

- InterSystems started in 1978 with ISM, a Mumps implementation on Unix, VMS and PDP-11
- InterSystems purchased DSM (Digital Standard Mumps) from Digital Equipment Corp. in 1994
- DSM had implementations on PDP-11, VAX-VMS and Alpha
- The Caché database was launched in 1997 on Windows, Unix and OpenVMS

Some history, present & future

- Caché was build as a Relational and Object Oriented database, while remaining backwards compatible with existing M[UMPS] implementations like DSM
- Caché runs on OpenVMS clusters
- InterSystems will support Caché on OpenVMS as long as HP supports OpenVMS

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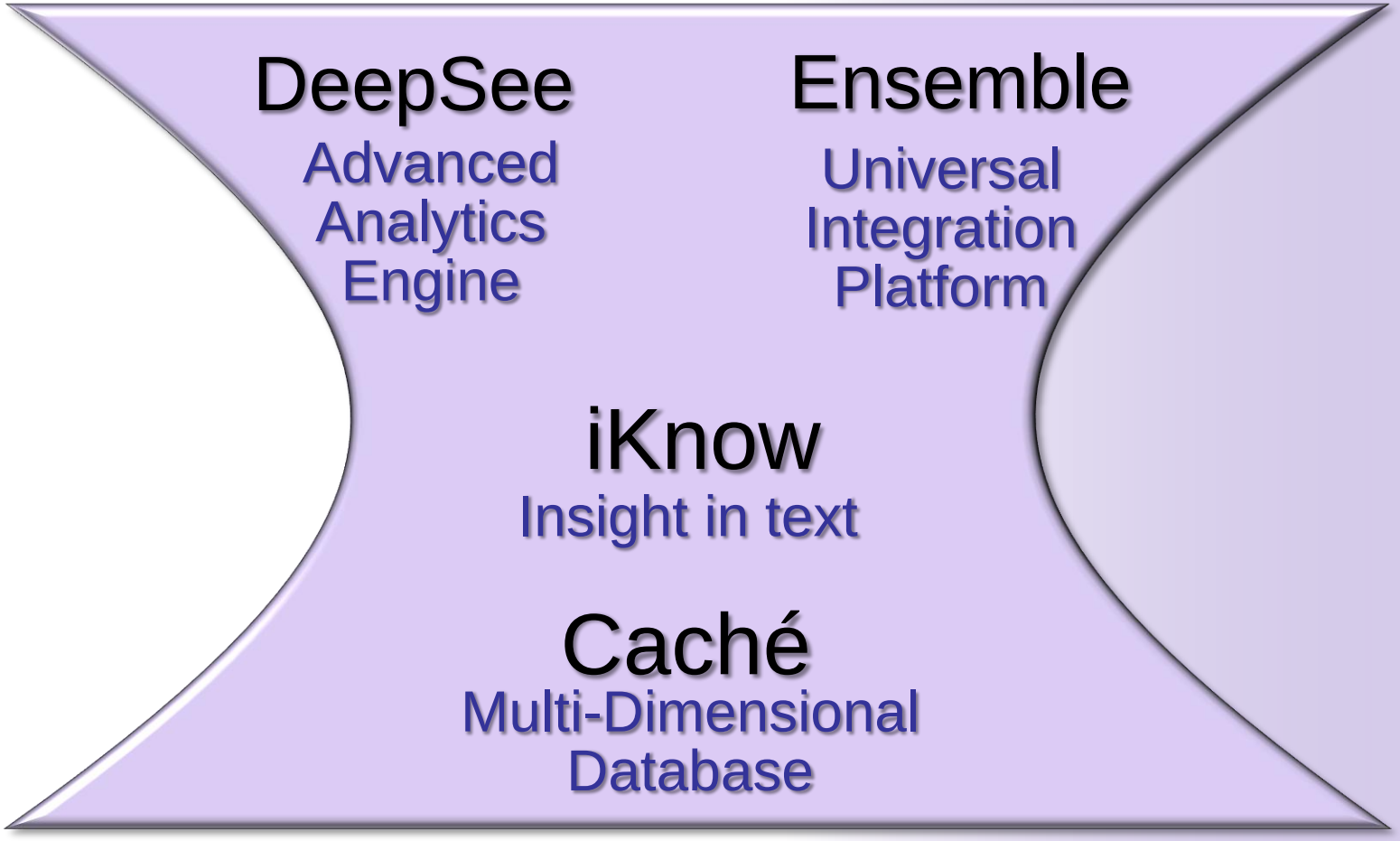
InterSystems Technology



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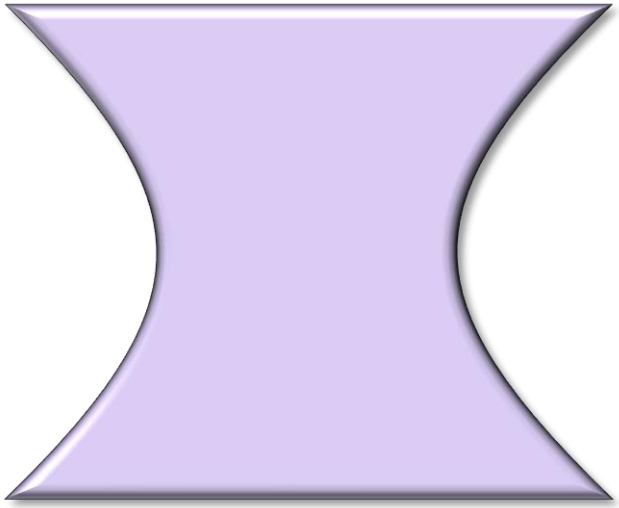
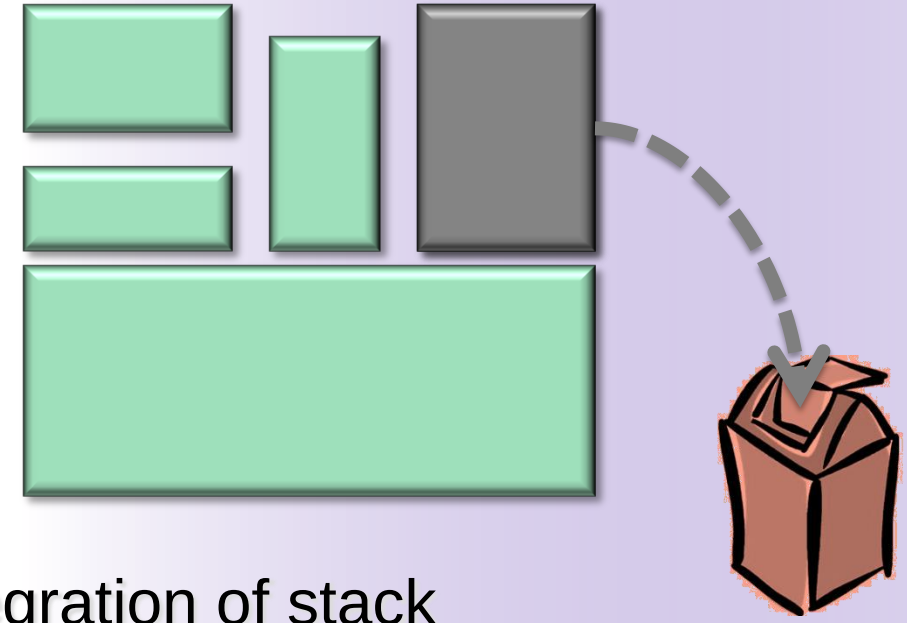
Platform versus Stack

Rich Platform



Technology Stack



- Avoid complexity of initial integration of stack
- Avoid complexity of keeping stack components in sync
- Avoid complexity of planned obsolescence

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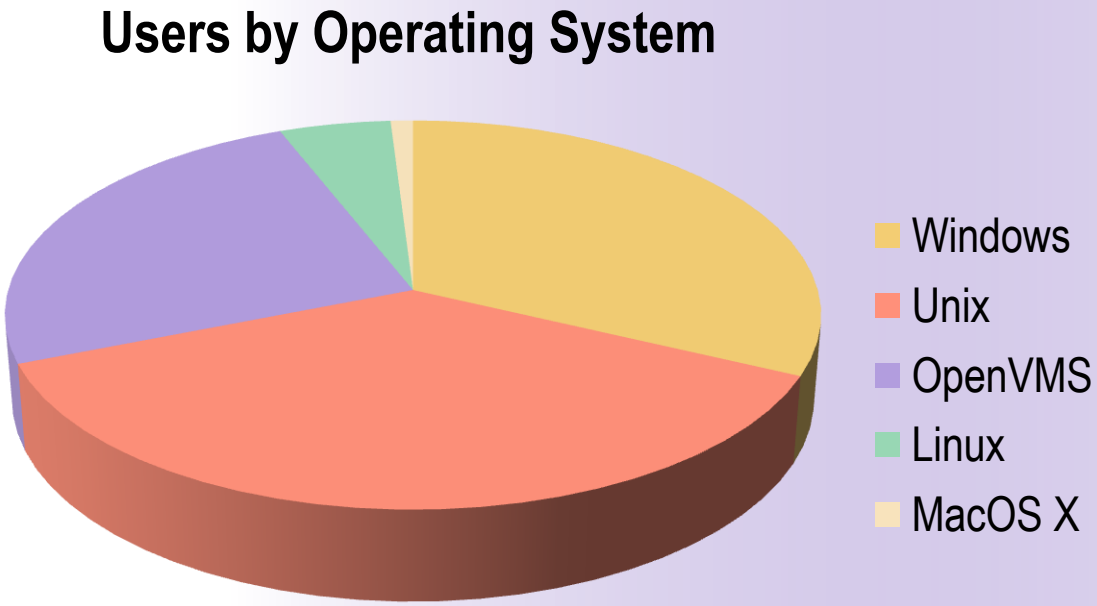
Supported Operating Systems

- HP-UX, Open VMS, Tru64
- IBM AIX
- Windows
- Solaris
- Linux RedHat, Suse
- Mac OS X



http://www.intersystems.com/cache/technology/product-tables/prodversion.html

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Who is using Caché on OpenVMS?

http://www.hhla.de

- **HHLA - HAMBURGER HAFEN UND LOGISTIK AG**
  - #2 container harbour in Europe
  - 4 container terminals
  - > 6M Standardcontainer (TEU) [2006]
  - Alpha -> Integrity
  - 600 Caché Users

- **~ 50 more VMS Systems in DE + AT**

Caché – OpenVMS in the US

- VA – Veteran‘s Administration

  on fault tolerant VMS clusters

- DoD - Department of Defense 65,000 user 133 sites

  Army:28 Air Force:61 Navy:20 Navy Ships:4 Tactical/Mobile:40

- Quest Diagnostics $4.7 billion /year

  “ the nation's leading provider of diagnostic testing “

- GE / IDX installed at 3,300 customer sites. 138,000 physicians

  380 integrated delivery networks (IDNs) representing more than 500 hospitals
  175 large group practices with more than 200 physicians
  665 mid-size group practices with less than 200 physicians
  2,100 full-time employees.

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What is Caché ?

- Caché **is** an object-oriented database
- Caché **is** a relational database
- Caché **is** a development and runtime platform ("application server")
- Caché **is** a dynamic web application server
- Caché **is** a rich internet application development environment

InterSystems CACHÉ®

Characteristics of Caché as a database

- Caché is fully ANSI SQL compliant and proposes all the usual relational infrastructure (tables, views, domain/uniqueness/referential integrity constraints, triggers, stored procedures…)
- Caché data can be created and accessed **at will** according to the object-oriented, relational and hierarchical paradigms
- Caché uses a highly efficient multidimensional storage engine to efficiently store simple tables as well as complex object graphs

Caché as an application server

- Caché Object Script is a powerful programming language for middle/back-tier development
- Caché is an object-oriented AS, but also supports procedural approaches
- Caché uses the weakly-typed programming model
- Caché supports multiple inheritance
- Caché features a very rich API – yet very easy to learn and use
- Caché features a rich set of utilities

Caché as a Rich Internet Applications Server

- Infrastructure is "Caché Server Pages" (CSP) technology
  - Concepts similar to JSP/JSF
  - Direct access to data simplifies development of data-aware web applications
- ZEN technology provides easy development of "rich" browser-based applications
  - Declarative language
  - AJAX-enabled
  - MVC support
  - Reports framework…

Caché is Open*

* not “open-source”!

- Caché comes with state-of-the-art ODBC 2 and 3.5, JDBC 4 (type 4) and ADO.Net drivers
  - Includes a certified Hibernate dialect
- Caché can project data from external databases as local structures through JDBC and ODBC
- Caché comes with extensive object-oriented connectivity for Java, .Net, C++, Python and Perl clients
- Caché features a gateway to Java and .Net code
- And much more…

What is Caché used for?

- Caché has been used for many years by application developers to develop "off the shelf" applications
  - Web-based, terminal-based, headless, middle-tier, back office, etc.
- Caché is used by end users as a pure database
- Caché is used by end-users as an application server
- Caché is the technical infrastructure layer for InterSystems' technological and application stack

Caché benefits

- The Caché database is well suited for high volume of transactions and is massively scalable (20k++ of concurrent users)
- Small TCO : easy install, no config, low maintenance
- Choice of technology and tools
- LTS: application created 20 years ago still work today, with richer functionality
- Embedded DeepSee technology brings Business Intelligence to your live transactional data

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Practical information

- Caché, Ensemble and DeepSee run on OpenVMS (current version = 2011.1.1)
- Free Caché download on www.intersystems.com/cache/downloads/index.html
- Gerd Nachtsheim (Senior Sales Engineer) Gerd.nachtsheim@intersystems.com

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The end

Thank you very much!

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