

IQware EMR Integration & Migration Architecture



AUGUST 2014

IQware Deliverables



1. Integrate with Legacy EMR Systems - “Do No Harm”

(Recognized by Technology Leaders)

2. Eliminate System Vulnerabilities

3. Enable IQware's MDM Strengths

- Interactive Data Analysis
- Flexible Reporting
- Data Control/Auditing

- TCB (Trusted Computing Base) that is DoD rated B2/C2 for the secure server. Client piece (XLIB) is very thin open source freeware.
- Separate the “user input piece” from the rest of the application so “malware” cannot “infect” the critical business logic / program operation.
- All communication to/from client is encrypted. Accepts any kind of laptop / desktop for the “user input piece” (Windows, Linux, Apple, Smart Phones, Tablets, PDAs, etc.)
- Secure server handles data management, program logic, decision making and operation execution.
- Rules drive reporting, data acquisition, analysis and research initiatives

IQware Recognized by Technology Leaders

"As part of Oracle's Emerging Markets Group, IQware's innovative incorporation of Oracle's database technology into its patented rule-based software system is a paradigm shift in the the way software is designed, delivered and deployed. IQware's disruptive technology has the potential to open new markets and capture existing ones in spaces where regulatory compliance is expected, security is mandatory and flexibility is essential."

- *Rajat Dham, Branch Manager, Oracle Emerging Markets, Oracle Corporation*

"Oracle's inclusion of IQware in its Emerging Markets Group was based on IQware's disruptive rule-based technology, IQware's innovative incorporation of Oracle's database technology into its patented rule-based software system and its proven security."

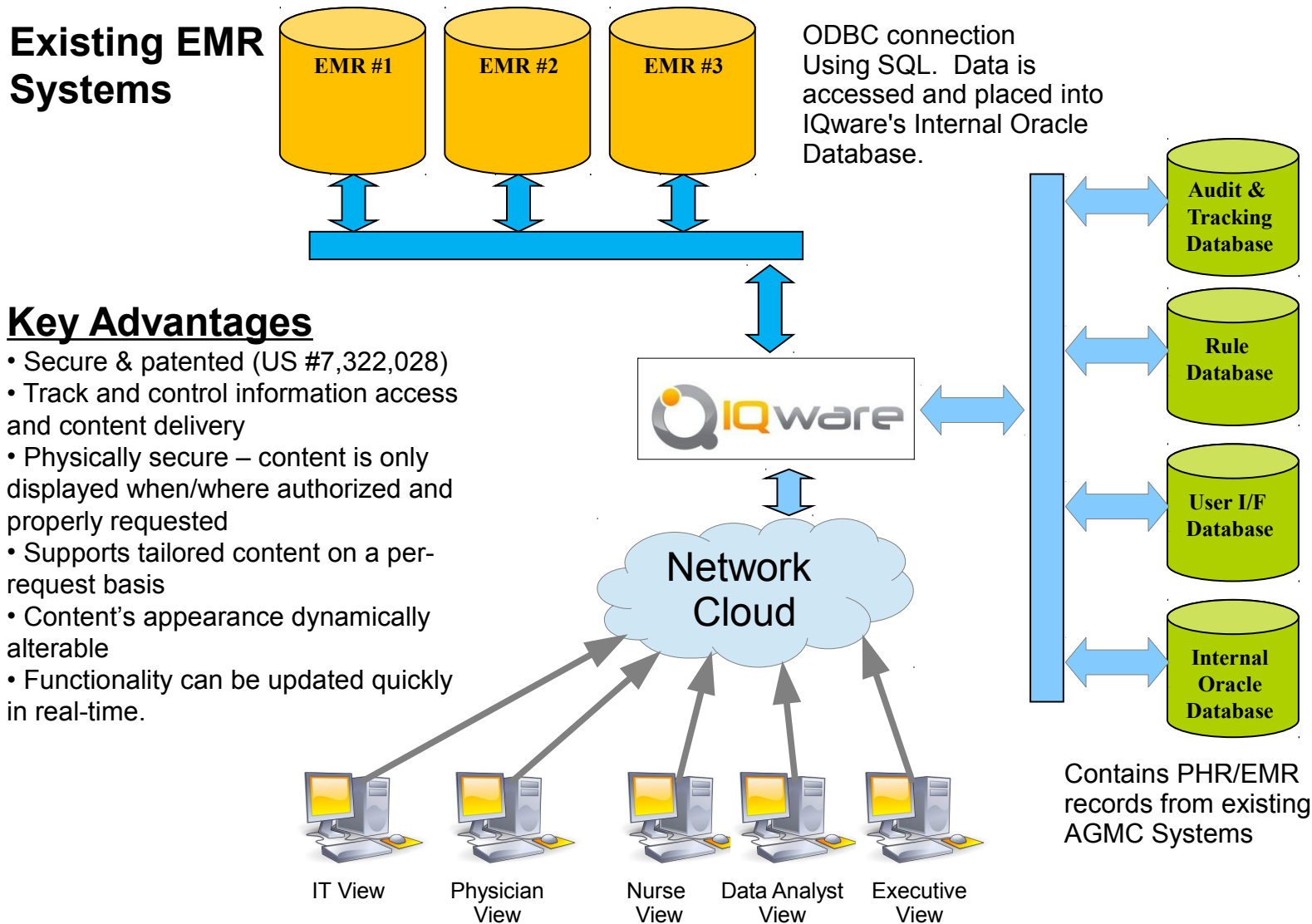
- *Jim Mathisen, Technology Sales Director, Oracle Embedded Technology Sales, Oracle Corporation*

The HP and IQware solution is built from the ground up to offer true information security. Unlike traditional software, IQware is desktop-virus-immune and does not require anything additional to be secure. It is built on HP OpenVMS—the most secure operating system available today which has never, to our knowledge, been hacked or burdened by a virus. Taking security one level further, IQware software is deployed on secure servers in the data center, and delivered to end-users via thin clients.

- *Hewlett-Packard Solution Brief*

IQware Leading the Next Generation of Software Deployment
Integrate Legacy Systems with IQware Secure Performance

IQware Architecture With Legacy Systems



Existing EMR Systems

ODBC connection Using SQL. Data is accessed and placed into IQware's Internal Oracle Database.

Key Advantages

- Secure & patented (US #7,322,028)
- Track and control information access and content delivery
- Physically secure – content is only displayed when/where authorized and properly requested
- Supports tailored content on a per-request basis
- Content's appearance dynamically alterable
- Functionality can be updated quickly in real-time.

Key Attributes

- Secure & Hacker-Proof.
- Audit trail for all data access and edits.
- Interoperable with any client.
- Works with existing legacy IT systems.

Reports (Outputs)

- To Executives
- To Regulators
- To Payers
- To Outside Partners

Other Inputs

- Manual data entry.
- Existing IT Systems
- Existing legacy processing systems.

Authorized Users

- User-specific views based upon login credentials
- Content control, audit & reporting based upon approved roles

Traditional IT Systems Are Not Secure

- Security cannot be just “added-on”. It must be integrated with both software and hardware
- A desktop security “add-on” can’t be compatible with existing IT systems and presents security vulnerability
- Magic software that will protect your desktop 100% without any other changes is not possible. (proven every day)
- Going over each line of code - a famous Microsoft quote - won’t fix the security problem.(again, proven every day and costly)
- Solution is unique redesign of the O/S, and application and network protocols & software architecture. (IQware)
- Security is more of an economic issue than a technical one.



Excerpt from the
“Cyber-Security Briefing”
by Dr. Steve G. Belovich

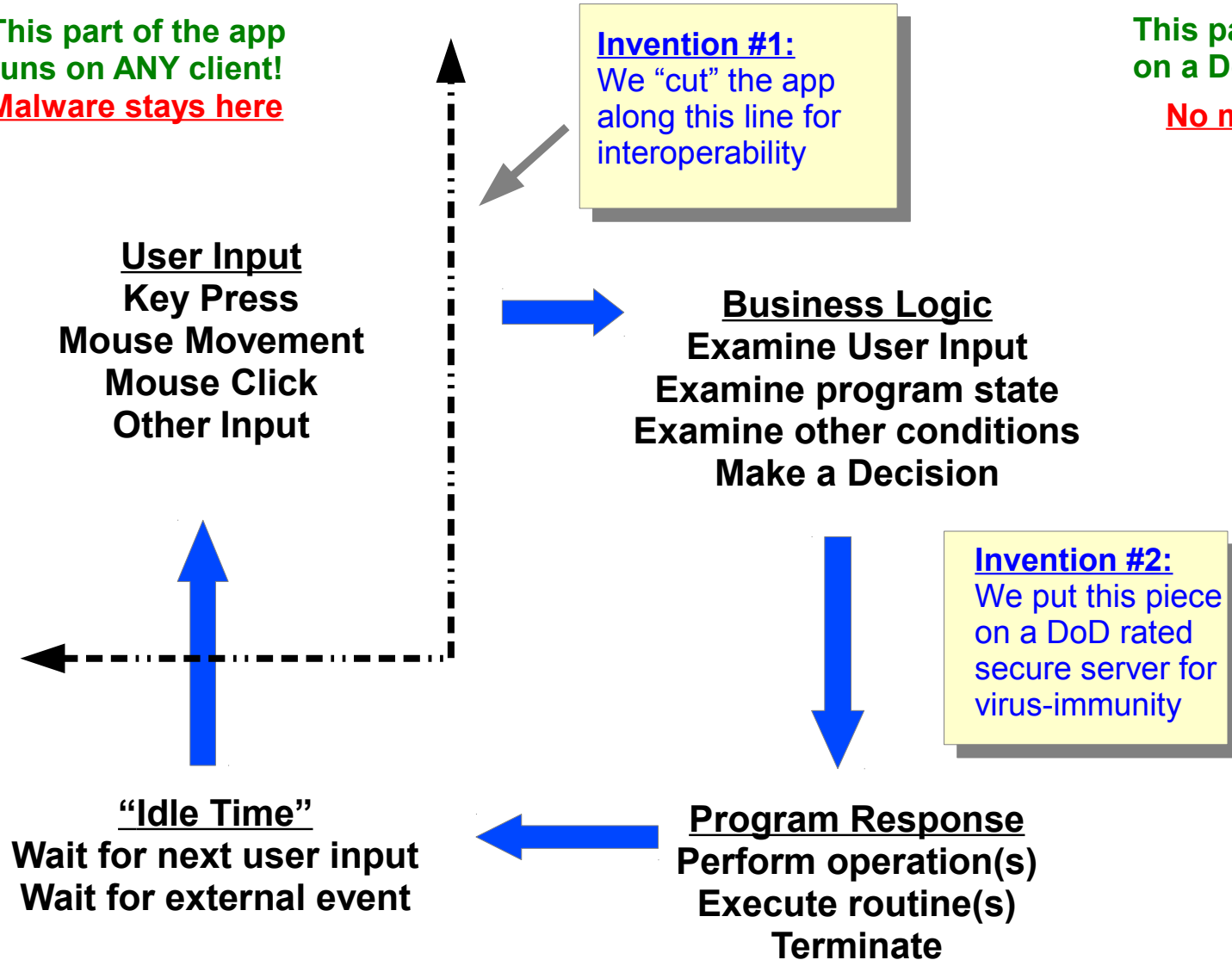
IQware's Unique Approach

(Patented US #7,322,028)

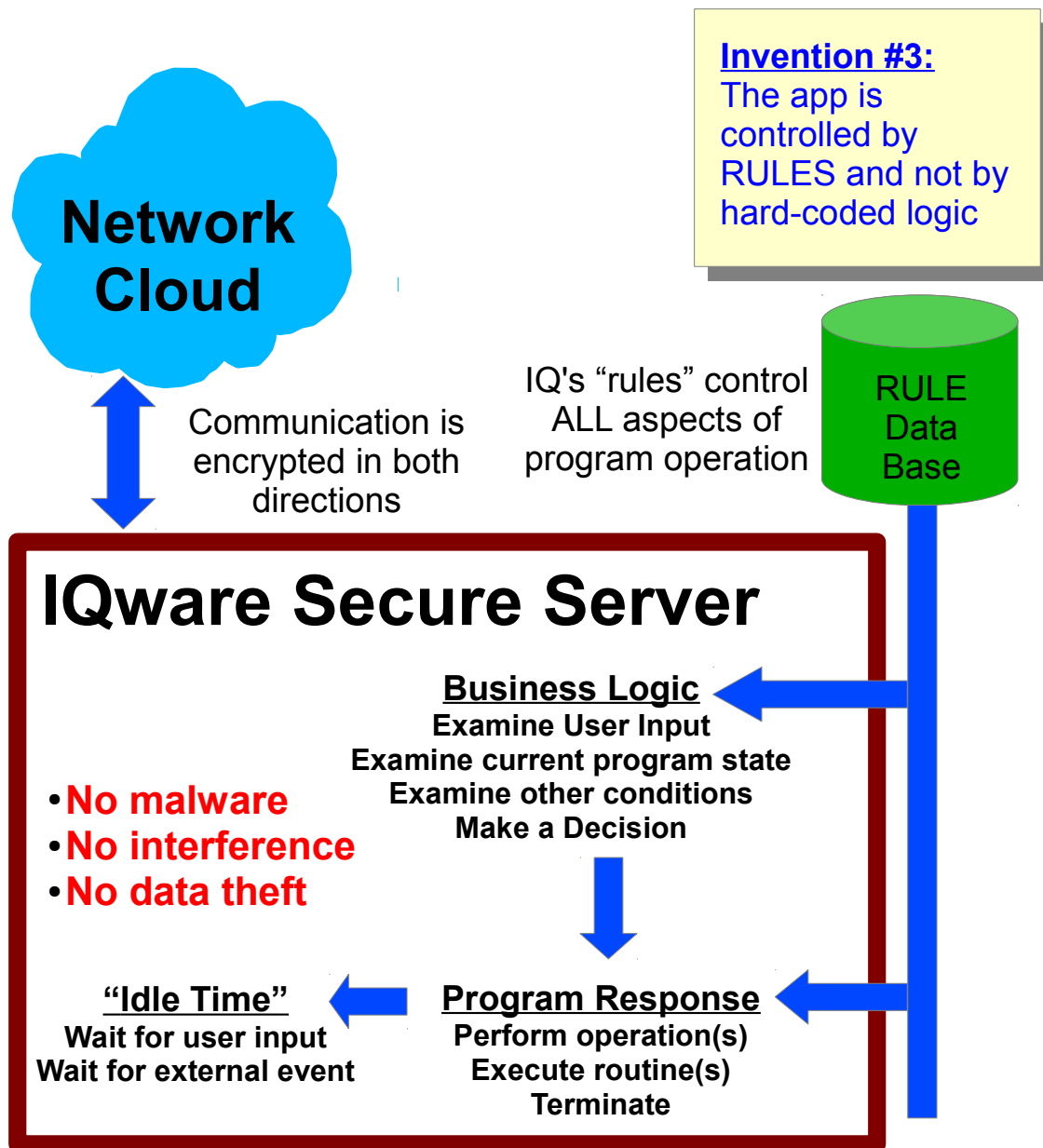


This part of the app runs on ANY client!
Malware stays here

This part of the app runs on a DoD secure server
No malware here



IQware's Rule-Based Invention



Invention #3:
 The app is controlled by RULES and not by hard-coded logic



- IQware converted the application into a "Rule Processor" that executes rules.
- Rules control the business logic, program state, other conditions.
- Rules control screen appearance, menus, toolbars, other visual aspects of the application.
- Rules control all program decisions and operations.
- Rules control all database access, data formatting, data presentation and data display.
- Rules are configured graphically without any programming.
- Rules can be changed "on-the-fly" so new functionality can be added while the application is running!

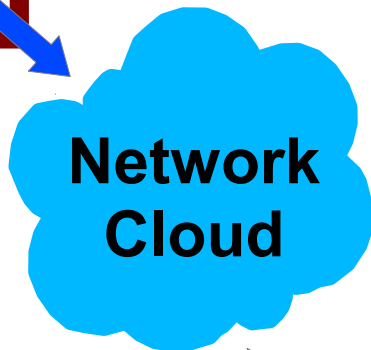
IQware's Secure Architecture



PC or PC Server

- **Malware remains here**
- **Only this machine is vulnerable.**

User Input
 Key Press
 Mouse Movement
 Mouse Click
 Other Input



- User events are encrypted and sent to the secure server.
- No sensitive data (e.g. UID or PWD strings) is in PC's RAM.
- Malware within PC cannot "infect" secure server.
- End-user client is "thin" deploying XLIB which is available as open source freeware.
- Any device may be used: Windows, Linux, Apple PCs, tablets, smart phones, etc.

- Secure server controls all business logic and makes all application decisions.
- Secure server performs all application operations.
- Malware cannot affect secure server (non-Intel CPU ISA, DoD rated B2/C2).
- Optional CAPTCHA images can be used so that text strings (e.g. SSNs, UIDs, PWDs, etc.) are never sent to the virus-prone PC client.

IQware Secure Server

- **No malware**
- **No interference**
- **No data theft**

Business Logic
 Examine User Input
 Examine current program state
 Examine other conditions
 Make a Decision



"Idle Time"
 Wait for user input
 Wait for external event

Program Response
 Perform operation(s)
 Execute routine(s)
 Terminate

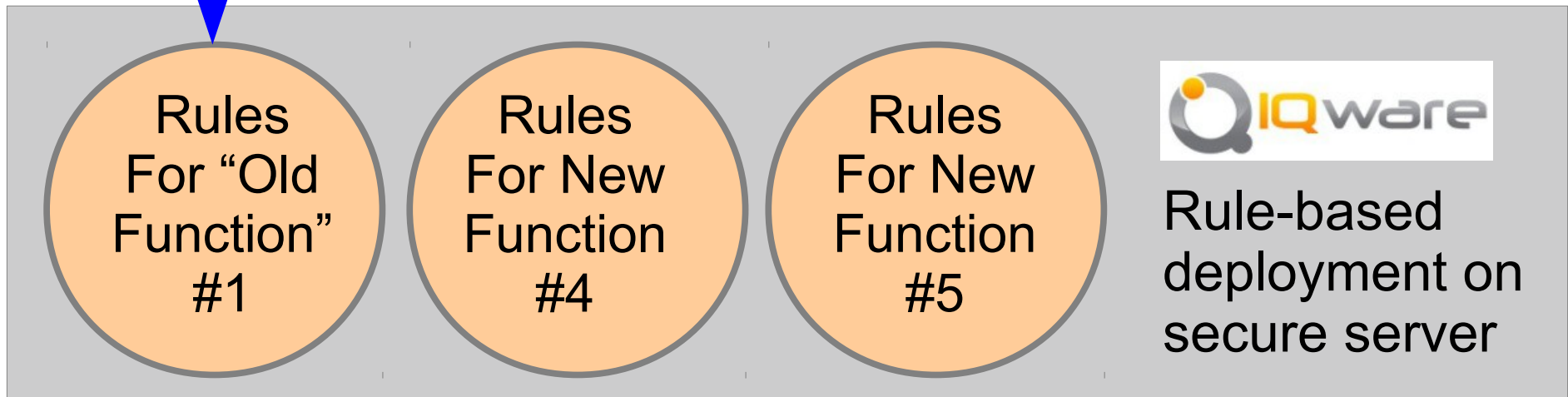
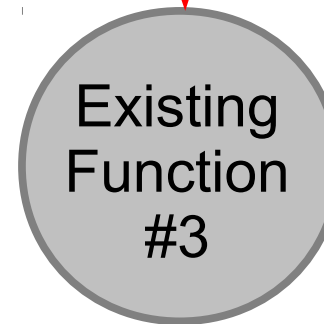
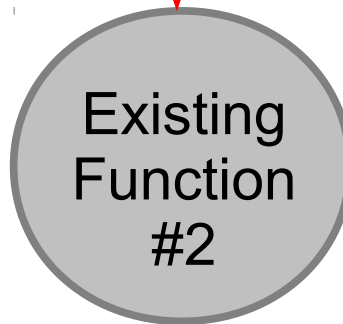
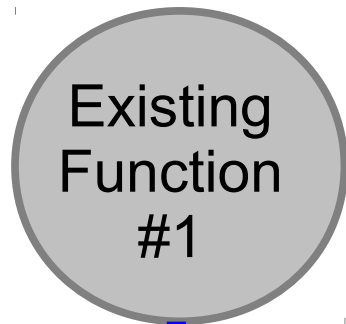
IQware Delivers Flexible Functionality



Functions can be improved and easily migrated to IQware

Existing functions can be maintained if desired, however these functions are not IQware secured

Customer's
Current IT
System
Capabilities



IQware delivers NEW functionality ... in SECURE environment

Why Choose ?

- **Traditional Software:**

- Costs too much, both initial and ongoing
- Long development and deployment schedule
- Extensive ongoing maintenance
- Data integrity issues across multiple systems
- Inflexible adaptability to new opportunities/challenges
- Not secure, vulnerable to cyber attacks

- **IQware:**

- Cost effective, both initial and ongoing
- Rapid deployment ... 2 to 3 months
- Ongoing maintenance built in
- Elimination of data pillars enabling data integrity
- Rules based logic enables rapid response to change
- Unique, patented architecture delivers unmatched security