SURROUND TECHNOLOGIES™

Creating software people love!

Your Legacy System

Gentlemen, we can rebuild it.

We have the technology

We have the capability to build your companies most *powerful software*.
Your legacy system will be that software.
Better than it was before,
Better... stronger... faster.

©1973 Six Million Dollar Man

Accelerating Software Development and Modernization

and becoming **Software Superheroes**

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Today's Speaker

Presented By: Lee Paul

[CEO / Director - Software Superhero Division]

lpaul@surroundtech.com | www.surroundtech.com

Socialize:

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My First Heroic Feat

A Super App

Microsoft Office Lens

Sometimes Microsoft gets it right!!

Available on iPhone, Android and Windows Phone

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We are

Software Development & Modernization

SUPERHEROS

SURROUND TECHNOLOGIES™

Creating software people love!

With

The **Right Strategies**

The **Right People**

The **Right Processes**

& The **Right Tools**

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To Accelerate the Development of Software People Love!

You will

build powerful applications FAST

and

change them even faster!

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Solutions for:

Mobile
Web
Windows
Integration

DEVELOP

FASTER BETTER MORE

Reach your
Software Superhero Status!

Speaking of Super.

My son thinks I am!!

I showed him an old floppy disk….

He said “Wow… Cool!
You 3D printed the save icon!”

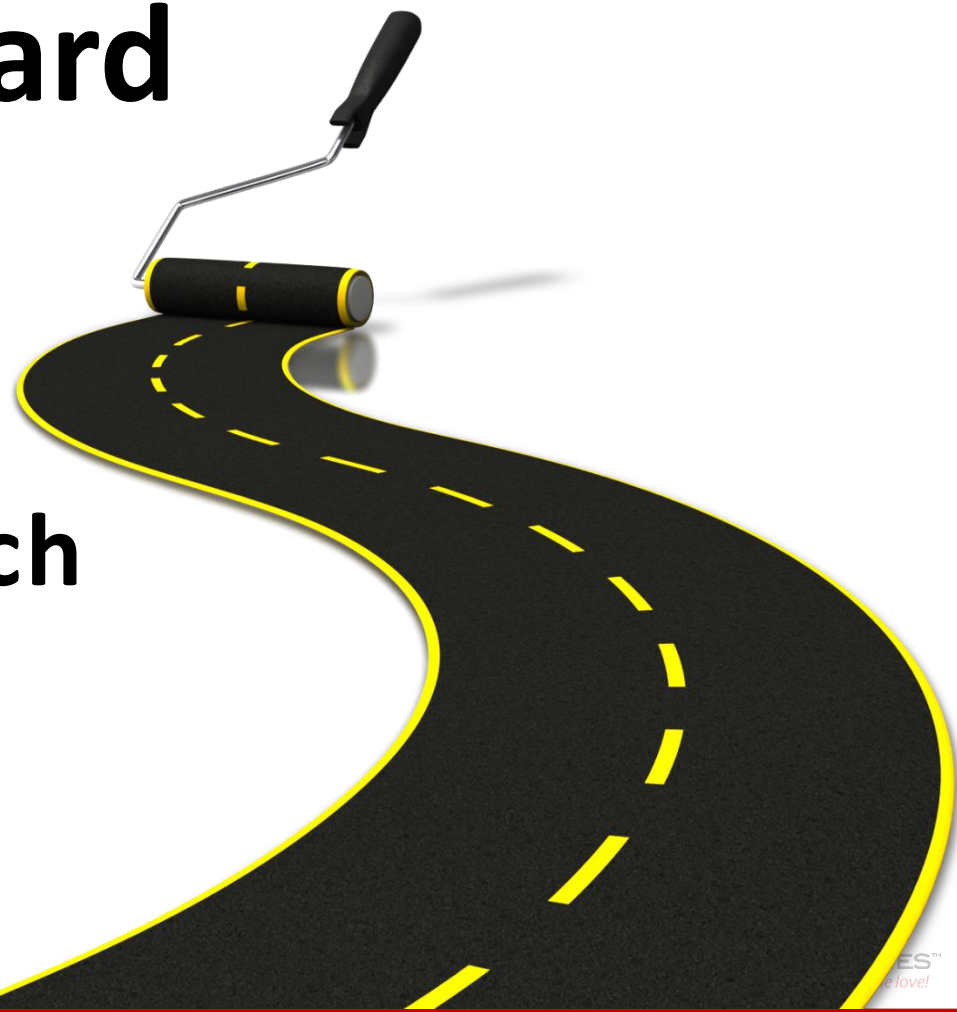
Accelerating Software Development and Modernization

and becoming **Software Superheroes**

The Way Forward

A Modern Approach

To Software Modernization



To get to where you need to be.

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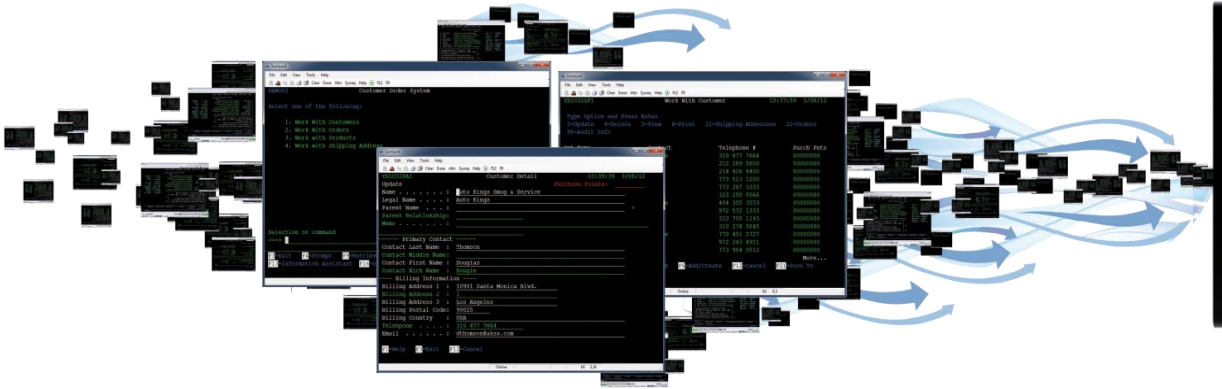
Go from these (Current State):



Outdated, Terminal,
Cryptic, Inefficient,
Command Line Interface

To this (Future State):

Modern, Multi-device,
Intuitive, Productive,
Robust User eXperience

Because…

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Truly effective Software Development doesn't happen by chance.

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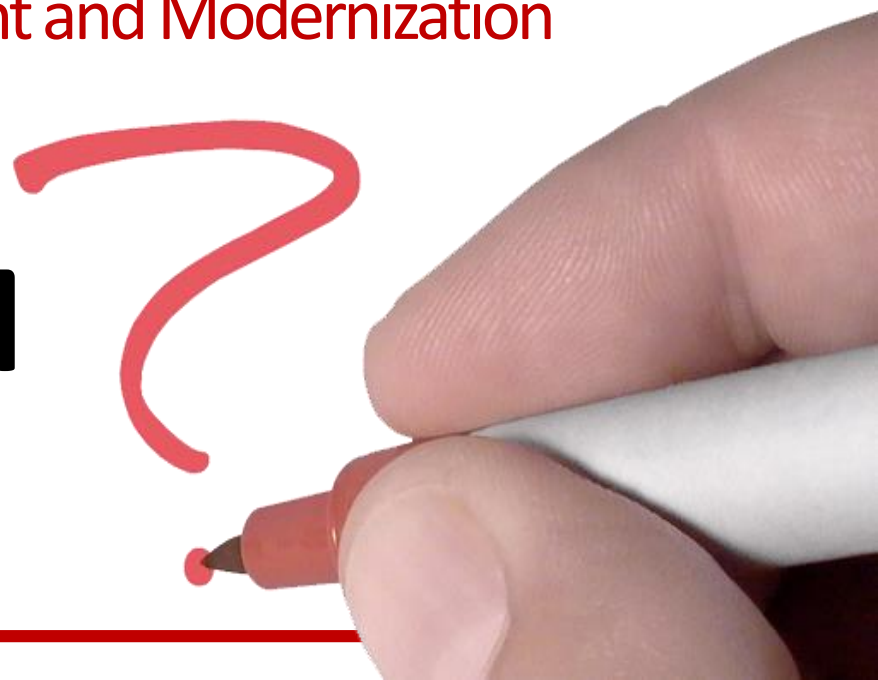
Accelerating Software Development and Modernization

DEFINING THE PROBLEM

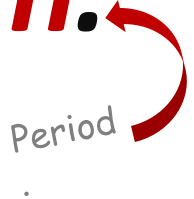


Why do we have software?

[Open question for the room. Let me hear your thoughts.]

The Answer Is Simple.

Software Solves A Problem.



It's that ***simple.***

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PROBLEMS PLAGUING SOFTWARE

See if you have some of these…

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Software Problems

- Software gets in the way of completing tasks
- Slows down the users workflow.
- Requires more work for users, rather than less.
- Hides system information through convoluted access or navigation.
- Is overly complex and difficult to learn.
- Is overly simplified and inefficient.
- Too easy to make mistakes.
- Is aggravating and frustrating to use.
- Makes people very unhappy

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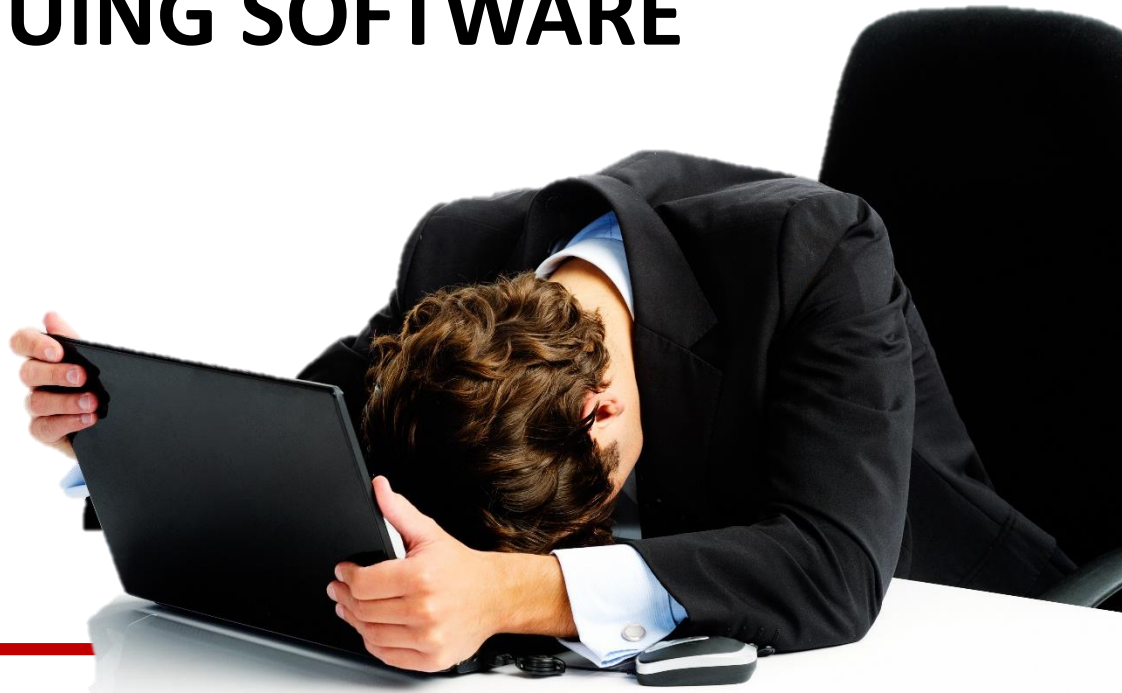
PROBLEMS PLAGUING SOFTWARE DEVELOPMENT



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Software Development Problems

- Long Software Release Times
- Long Waits for Requested Changes
- Significant Project Backlog and Reduced Delivery Capacity
- Lack of Return and Significant Total Cost of Ownership (TCO)
- Limitations and Proprietary Lock-Ins
- Changes are often High Risk and Disrupts Business
- Software from the dark ages.
- No ability to adapt to changing technology.
- Decreased Productivity and Adoption.
- Lack of Application Monitoring, Management & Control

What is Modernization?

It is a software development problem.

Software Development Problem

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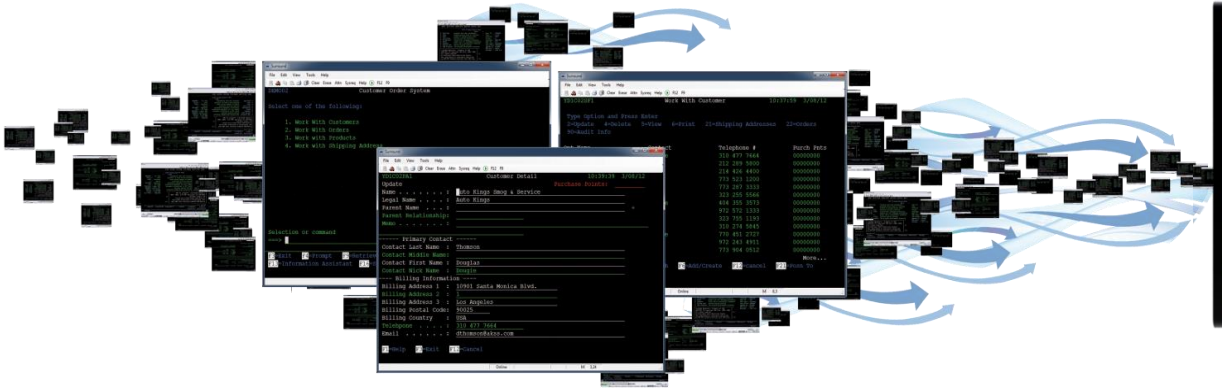
Go from these (Current State):



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To this (Future State):

Modern, Multi-device,
Intuitive, Productive,
Robust User eXperience

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Typical Modernization Problems

- Tactically focused, lacking alignment to business strategy
  << or >>
  Strategically focused, lacking considerations for immediate or short term needs
- Business value proposition is poorly articulated or non-existent and may not even be well understood
- ROI is primarily or exclusively based on IT cost savings
- Proposed initiatives lack business visibility, buy-in and funding
- End State Vision does not address technical debt inherent in legacy data and application architectures

Technical Debt

- Results from applying changes that degrade data and software architecture.
- Each set of changes increases time and cost of applying future changes.
- **Too much technical debt can "bankrupt" Software projects**
  - Occurs when current software no longer serves a foundation for future state business evolution
  - Changes beyond simple fixes are too costly and time consuming to pursue
  - Major business initiative are taken off the table, escalating concerns to senior executives
  - Software transformation options narrow dramatically and transformation costs and efforts increase significantly

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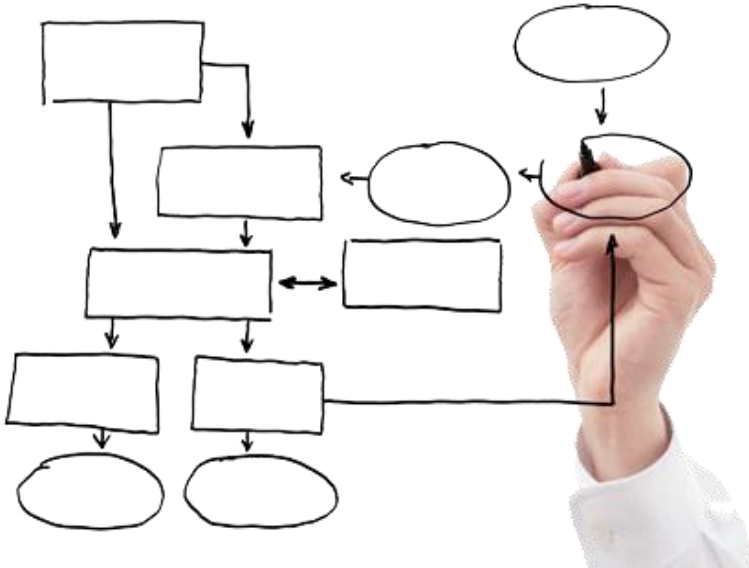
Accelerating Software Development

DEFINING THE REQUIREMENT



4 Players in the Development Process

- The Business

  They invest in software to meet a business need.

- Users

  Their use of the software provides the return on the investment.

- Developers

  They take the investment and deliver the software

- Providers

  They provide software and tools to decrease the investment, increase the return or both

Modernization Approaches

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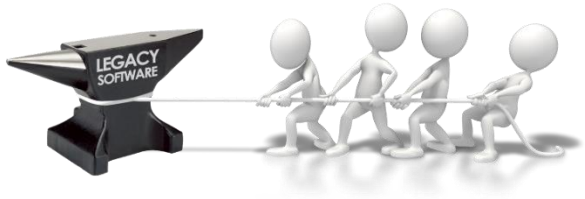
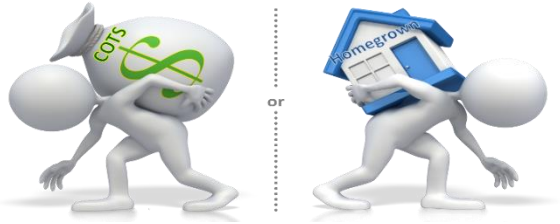
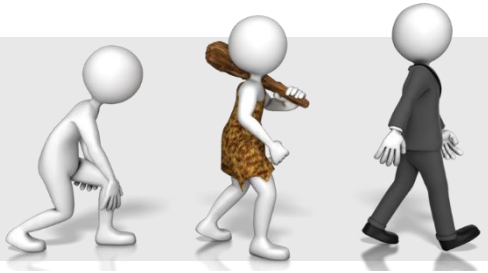
- Purely Tactical
  (Band-Aid)



- Purely Strategic
  (Rip and Replace)



- Tactical and Strategic
  (Evolve and adapt)



Modernization Musts

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- Stop treating Modernization as a “Modernization project”
  Treat it as a “Software Development Project”.
  Cause, that’s what it is!
- Look at your Software Development challenges holistically and eliminate silo-based planning and funding.
- Tie Software Development investments to business transformation, Increased Business Efficiency, business strategy and business requirements.
- Understand, articulate and communicate the risks of Technical Debt and Development Bankruptcy.

Modernization Musts

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- Understand your Current State.
- Define your Future State – The Vision!
- Balance short term tactical and long term strategy with immediate business demands, ROI and TCO
- Establish a business-driven framework to drive modernization via architecture transformation concepts
- Support the developer, the user, and the business during every stage of the journey

Modernization Musts

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- Have a phased strategy that delivers quickly
- Implement change at a pace that suits your business
- Take an adaptive agile approach.
  The shortest route is not a straight line.
- Reengineer only where and when needed
- Ease in to Expertise
- Framework foundation for future agility

Modernization Musts

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- **Pay Down Technical Debt**
  - DO NOT INTRODUCE NEW DEBT!!!
    New standards and processes; Change development culture
  - Include debt reduction activities in new development
  - Eliminate/Minimize any Band-Aid Solutions
    Make sure tactical business needs truly justify need
  - Avoid Limitations and Dead Ends
    Especially those introduced through proprietary tools and technologies
  - Phase out existing technology limitations
  - Re-architect where and when possible

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Accelerating Software Development

ADOPTING A STRATEGY

Modern Software For

1. The Business
2. The User
3. The Developer

#1

Modern Software

for a business developing software.

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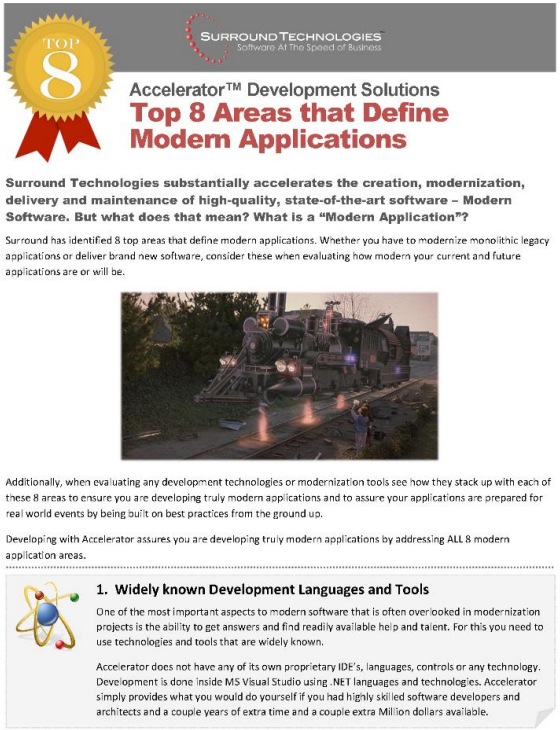
Modern Software



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Software At The Speed of Business

Accelerator™ Development Solutions

Top 8 Areas that Define Modern Applications

Surround Technologies substantially accelerates the creation, modernization, delivery and maintenance of high-quality, state-of-the-art software – Modern Software. But what does that mean? What is a "Modern Application"?

Surround has identified 8 top areas that define modern applications. Whether you have to modernize monolithic legacy applications or deliver brand new software, consider these when evaluating how modern your current and future applications are or will be.

Additionally, when evaluating any development technologies or modernization tools see how they stack up with each of these 8 areas to ensure you are developing truly modern applications and to assure your applications are prepared for real world events by being built on best practices from the ground up.

Developing with Accelerator assures you are developing truly modern applications by addressing ALL 8 modern application areas.

1. Widely known Development Languages and Tools

One of the most important aspects to modern software that is often overlooked in modernization projects is the ability to get answers and find readily available help and talent. For this you need to use technologies and tools that are widely known.

Accelerator does not have any of its own proprietary IDE's, languages, controls or any technology. Development is done inside MS Visual Studio using .NET languages and technologies. Accelerator simply provides what you would do yourself if you had highly skilled software developers and architects and a couple years of extra time and a couple extra Million dollars available.

Top 8 Areas:
That define Modern Applications

1. Widely known Development Languages and Tools
2. Readily Available Skills and Multi-Vendor Support
3. Productive User Experience (UX)
4. Adaptable Software Architecture
5. Run on all types of devices
6. Seamless Integration to other software and systems
7. Standard Web Services and system interfaces
8. Robust Database / Data Stores

Business-Led Development

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- Highest importance: Overall value to the business, both tactically and strategically.
- Properly aligns and balances the “4 Players”:
  - the **Business that invests in the software**
  - the **People that use it**
  - the **Team that delivers it**
  - and the **Vendors that help you get there**
- Define priorities and requirements: Base them on the business need and desired outcome rather than technology solutions alone.

Pareto Principle (80/20)

20% of the features

cause 80% of the usage

20% of the bugs

cause 80% of the crashes

Pareto Principle (80/20)

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- Focusing Technology Improvements using the Pareto Principle
- Value is not evenly distributed
- Effort can be focused to gain the majority of the value quickly.
- Focus on the 20% of the features that will give the most value (and build these features first).
- Release often to fine tune your feature set.
- It is OK to remove features that don't add value

Using the Pareto Principle will let you focus in a new way on the things that matter.

Project Success Factors

- Risks – to project success
- Schedule – deadlines for project success
- Budget – must be based on a justifiable ROI
- Resources – time, money, skills (people), tools, equipment
- Quality – security, usability, robustness, utility, beauty, performance, reliability, …
- Scope – features of the software

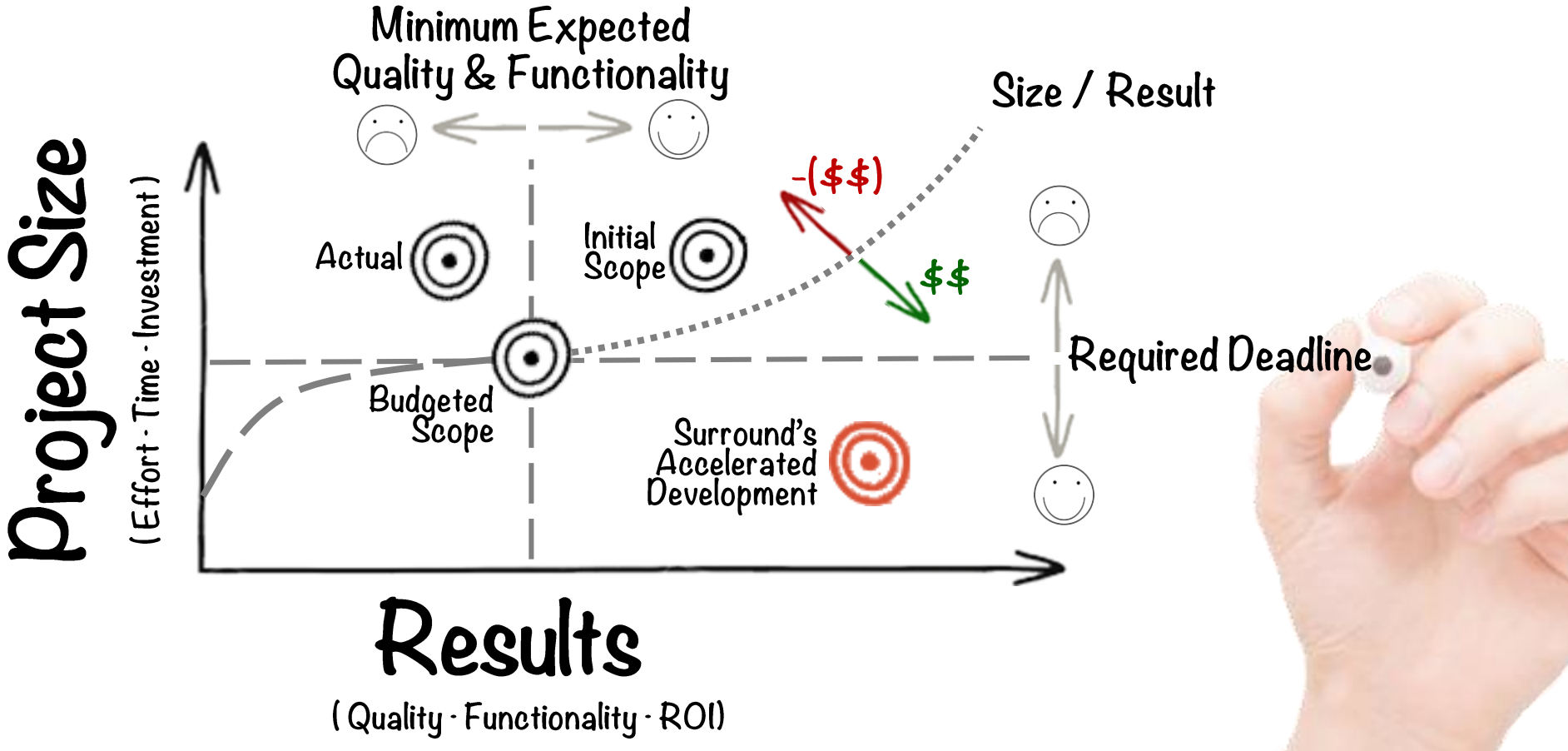
"Simple Undeniable Truth"

Project Size and the 6 Factors: The greatest impact to all of these factors is the project size (effort, time/duration, and investment).

Simple Undeniable Truth: the more you can reduce project size, the greater your odds of success.

Caution: sacrificing quality and features to force success will have just the opposite effect!

Simple Undeniable Truth



#2

Modern Software

for an “End User”

(employees, customers, business partners, vendors, …).

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Create Software People *Love*!

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A Usable Product

- Is easy to learn
- Hard to forget
- Minimizes burden
- Reduces workload
- Anticipates and forgives mistakes
- Does what the user wants, when the user wants it
- Always provides feedback
- Is satisfying and perhaps fun to use.
- Supports users at all skill levels and motivates them to advance

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Modern Software People Love

Eight is Great:
8 Keys to a Productive UX

1. Learnability
2. Memorability
3. Findability
4. Discoverability
5. Efficiency (Time on Task)
6. Accuracy (Task Completion)
7. Multi-Tasking
8. Subjective User Satisfaction

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Software People Want to Champion

Support	Users agree the software is useful, needed, and effective
Advocate	Users vocally talk about the value of the software to the business and encourages other to adopt it.
Sponsor	Someone who allocates their time and or resources to prioritize the use of the software.
Champion	Demonstrates accountability for the use of the software.

Demonstration

Providing Robust Applications to your users

Windows Desktop Application

Responsive Web Desktop-style and Mobile Application

Websites and Portals

#3

Modern Software

for the “Developer”

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All Software Developers have the same goal when developing:

To make the best applications possible!

...Unfortunately, they rarely have time or budget for that.

Can you Relate?

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Culture of Productivity

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The results are what matter the most.

Create a culture rooted in the "Get it done - results matter" philosophy.

- Software development is largely about creating a culture of high performance, and motivating and empowering people to achieve organizational goals and objectives.
- Foster development to be about the **speed** and **quality** of delivery.

Top 7 Pillars:
For Accelerating Windows, Web & Mobile Development

1. Productive User Experience
2. Process, Methodology & Standards
3. Software Design & Architecture
4. Developer Efficiency
5. Application Interoperability
6. Modular Software Snap-Ins
7. Leverage Existing Software Assets

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Process, Methodology & Standards

Define, Establish and Follow:

- **A Software Development Process** from concept to deployment to long term maintenance and enhancement
- **Software Development Standards** based on proven best practices.
- **Structured Development Methodologies** that optimize developer efficiency and focuses it on business functionality

Create guidelines to developing software responsibly and effectively with short- and long-term considerations for both the user and other developers that play significantly to the return on investment and ongoing total cost of ownership.

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Development Process

Transform how to envision, develop, and use software to drive ***greater growth and profit***.

Create a ***process*** for fast, quality, repeatable and continual development.

Continue to ***improve and adapt*** your process.

Accurately assess and estimate projects scope, effort and timeframes. This keeps development ***within budget*** and ***on schedule***.

Development Process

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- Provide clear details about a project and set the appropriate expectations for the users and business executives alike.
- Define and communicate your strategy
- Execute to and through delivery.

A solid software development process will prove project after project to deliver solutions the users and the business love in the expected budget and timeframe.

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Architecture

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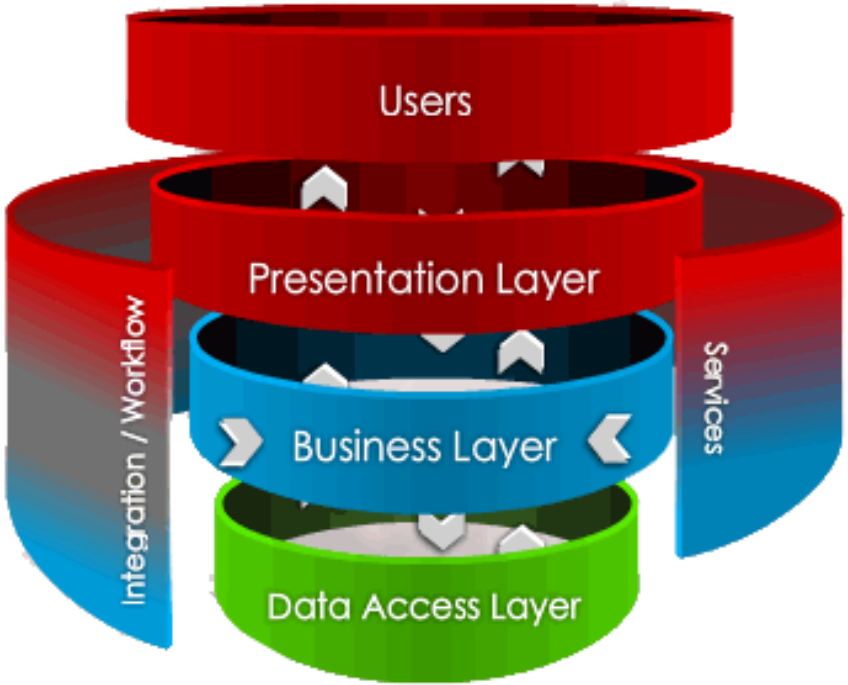
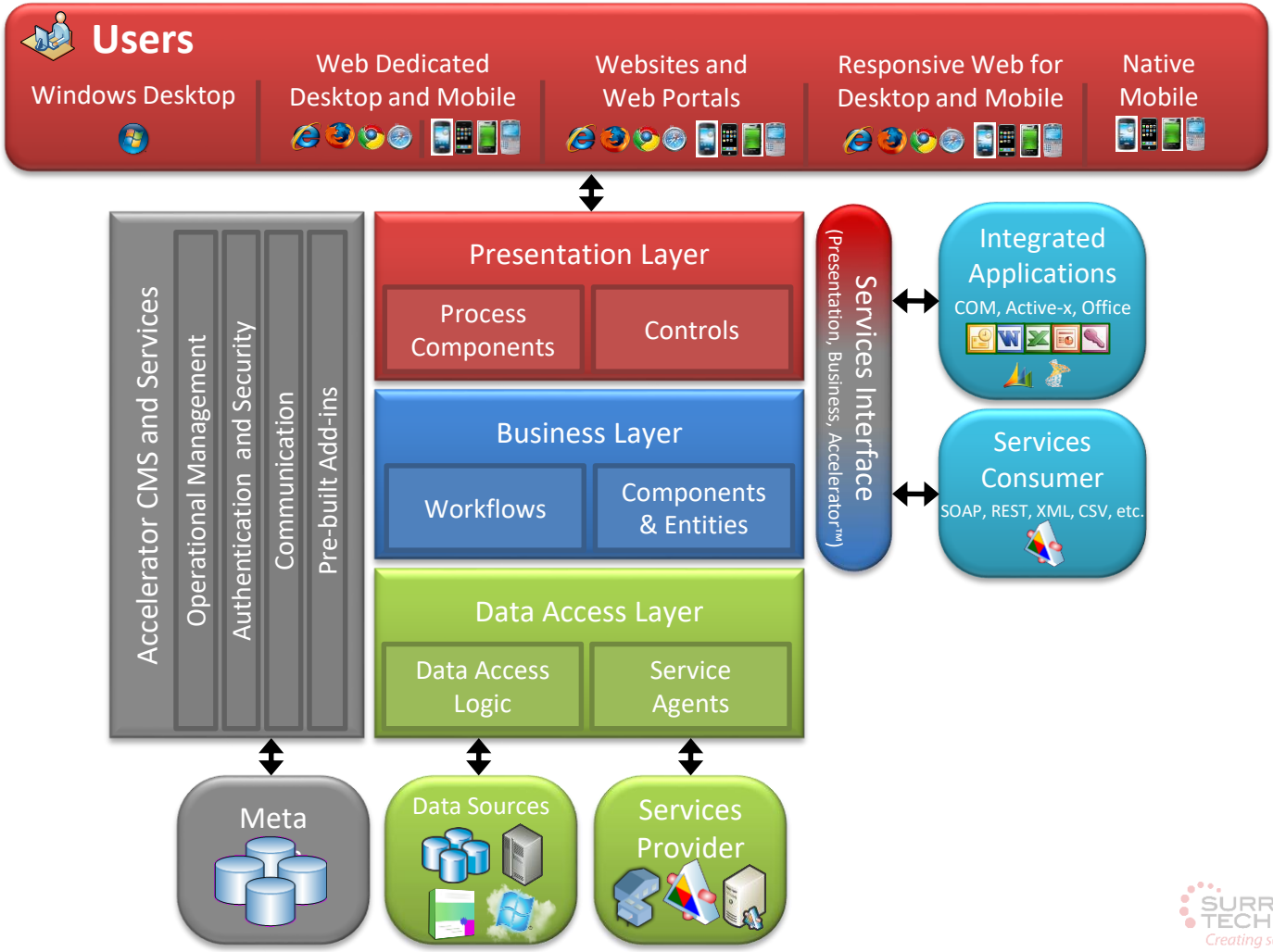
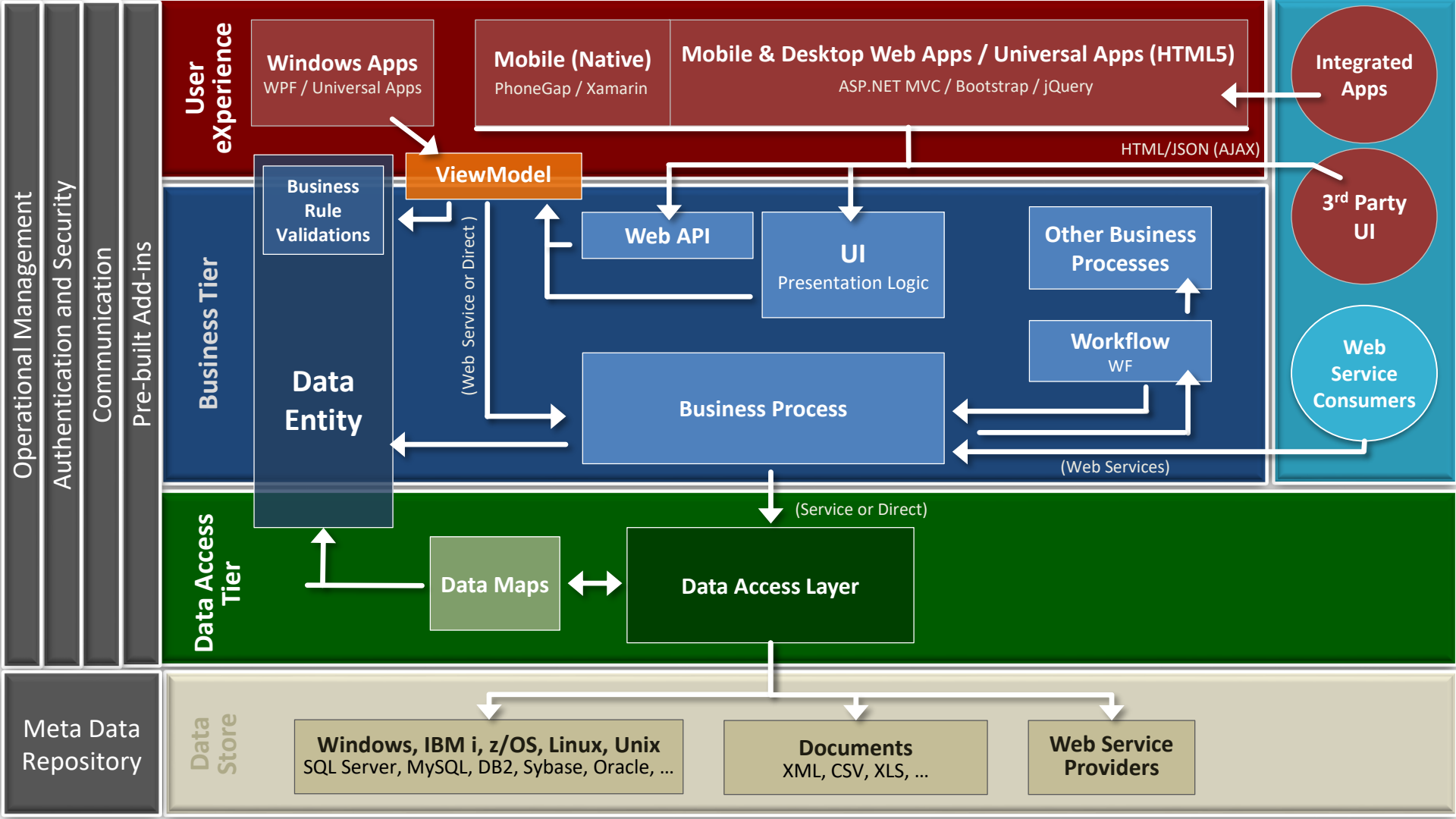
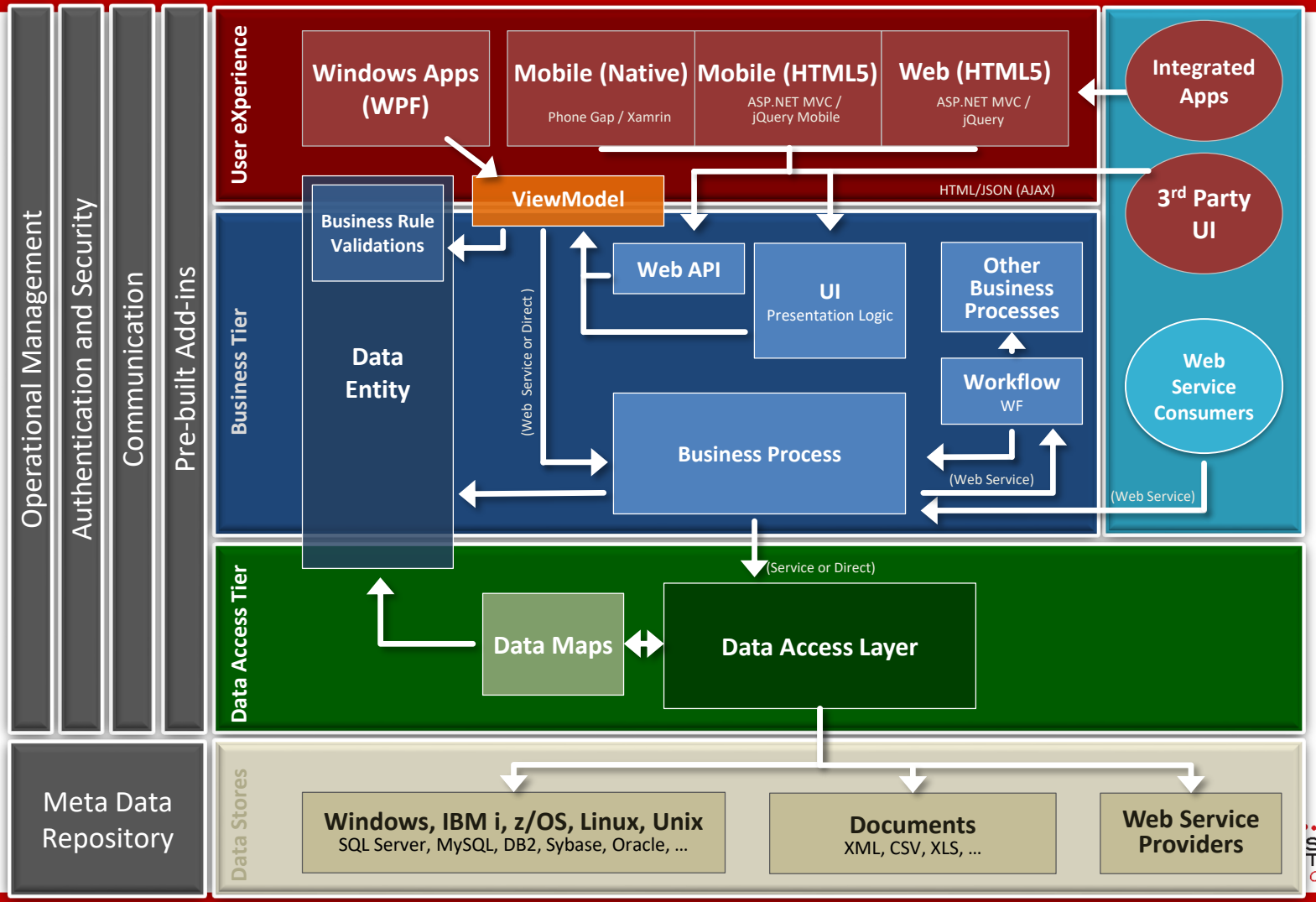
Develop future-proof software architecture



N-Tier Architecture




Operational Management
Authentication and Security
Communication
Pre-built Add-ins
User eXperience
Windows Apps
WPF / Universal Apps
Mobile (Native)
PhoneGap / Xamarin
Mobile & Desktop Web Apps / Universal Apps (HTML5)
ASP.NET MVC / Bootstrap / jQuery
Integrated Apps
HTML/JSON (AJAX)
3rd Party UI
ViewModel
Business Rule Validations
Business Tier
Web API
UI
Presentation Logic
Other Business Processes
Workflow
WF
(Web Service or Direct)
Data Entity
Business Process
Web Service Consumers
(Web Services)
(Service or Direct)
Data Access Tier
Data Maps
Data Access Layer
Meta Data Repository
Data Store
Windows, IBM i, z/OS, Linux, Unix
SQL Server, MySQL, DB2, Sybase, Oracle, ...
Documents
XML, CSV, XLS, ...
Web Service Providers



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6. Modular Software Snap-Ins
7. Leverage Existing Software Assets

Automation

- Measure the effort of your manual software development processes.
- Automate as much of it as possible (it's very freeing!)
- Reuse, reuse, reuse
- Software Generation
- Will help maintain standards
- Cleaner, consistent more maintainable code
- Huge time and cost reductions

Demonstration

Building Software Efficiently and Effectively

Software Generation

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Modern Software

- #1 – For the **Business** Investing in the Solution
  - Top 8 Areas that Define Modern Applications
- #2 – For the **People** that use the Software
  - Eight Keys to a Productive User Experience
- #3 – For the **Development Team** that delivers it
  - Top 7 Pillars to Accelerating Software Development

All this probably seems easier said than done, right?

It doesn't have to be!

Remember that results come from:

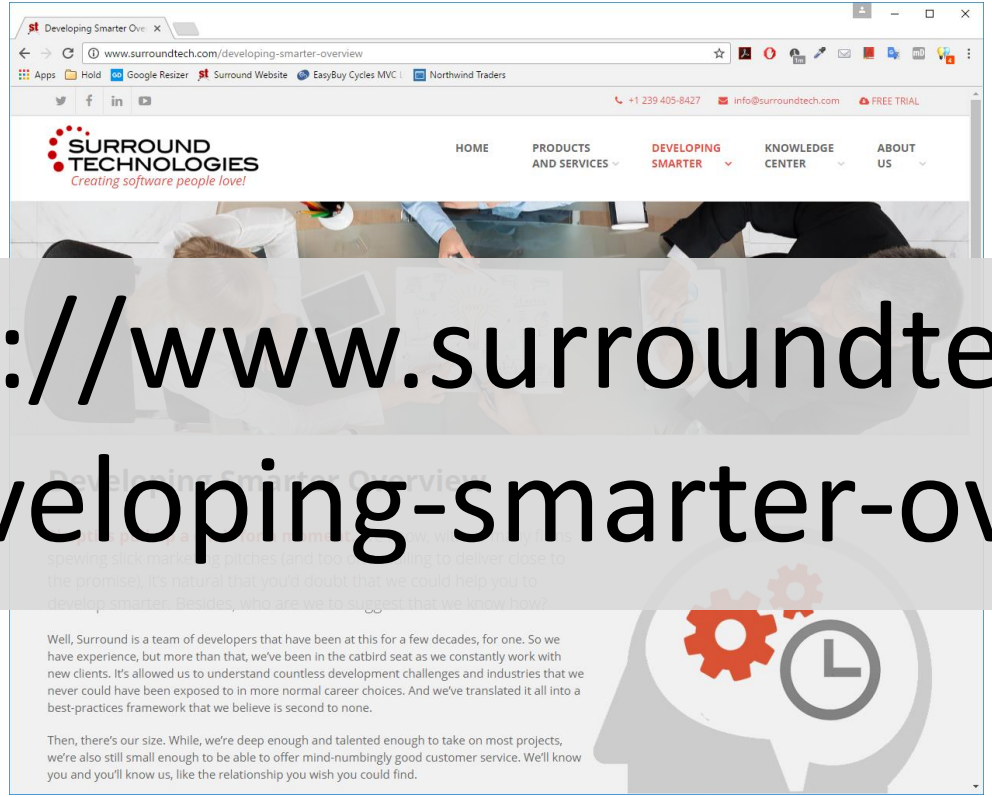
The Right Strategies

The Right People

The Right Processes

& The Right Tools

Developing Smarter



http://www.surroundtech.com/developing-smarter-overview

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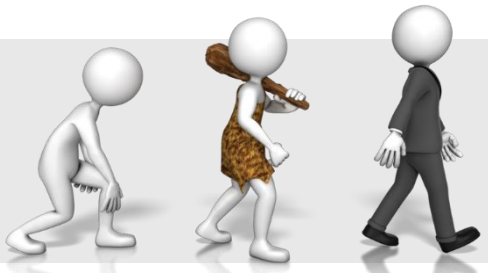
Our Strategies

We apply our broad industry experience to analyze and assess where you are today and where you wish to be in the future to provide an agile phased strategy to getting there over a timeframe that makes sense for your business.

- Tactical and Strategic

  (Evolve and adapt)



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Our Core Strategy

- **Accelerated Software Development**

  Build Great Software – Fast

  http://www.surroundtech.com/accelerating-software-development

- **Applied To Modernization**

  The Faster, Smarter Way Forward

  http://www.surroundtech.com/accelerating-application-modernization

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Tool Enablement

Develop Software People Love - Fast

http://www.surroundtech.com/accelerator

ACCELERATOR™ Freedom

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No Proprietary Technologies

No Limitations :: No Dead Ends

Food for thought

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If you could ***develop faster with better quality and more necessary functionality,*** *how many more projects could be* ***useful, usable, desirable and feasible.***

Reach your
Software Superhero Status!

Create Software Users Will Love

SURROUND TECHNOLOGIES™

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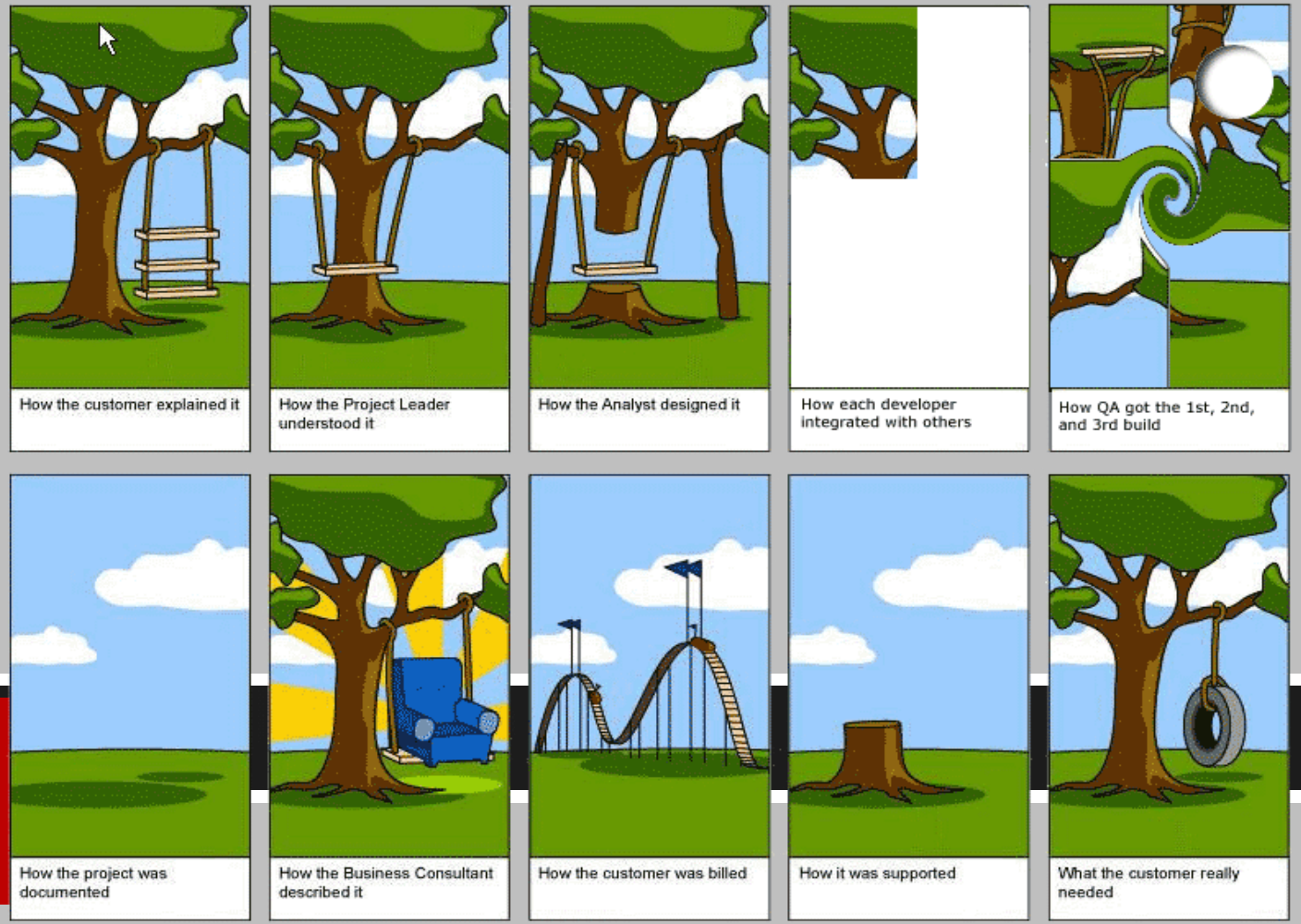
We believe that **you can be a software superhero** by creating software your users will love, and your business will see value and return.

Q&A


How the customer explained it
How the Project Leader understood it
How the Analyst designed it
How each developer integrated with others
How QA got the 1st, 2nd, and 3rd build
How the project was documented
How the Business Consultant described it
How the customer was billed
How it was supported
What the customer really needed

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Thanks for listening

Presented By: Lee Paul

[CEO / Accelerated Software Development Evangelist]

lpaul@surroundtech.com | www.surroundtech.com

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