Turnkey IaaS, PaaS, & SaaS
Enabling Teams to Quickly Create & Launch Sites

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- Over 17 Years in Drupal Community
- VC Backed Startup Founder With Exit
- CTO at Top 50 Website
- Acquia VP DevRel, Marketing, Products
- Tag1 Sales, Partnerships, & Marketing
Tag1 - #2 All Time Drupal Contributor
The Team Global Leaders Trust to Ensure Their Success
We Support Drupal & Drupal Association
Do You Benefit From Drupal? Fund the DA or a Module Developer

Tag1 Donates a Full Time Sr. Resource to Help Run the Drupal.org Websites, Tooling & Infra Needed to Create Drupal. Drupal Needs Your Support to Thrive!
Key Factors Driving Innovation vs. Obstructing Change
Success with Tech is Challenging at Scale

Capabilities and Resources Vary Widely Across Teams & Projects

Obstructing Change  Driving Innovation

How Large Orgs Build & Support Software, Tooling, and Infrastructure has a Major Impact on Where They Appear on this Spectrum
Success Factor: Facilitating Change

Facilitates Org. Change

Organizations are Hostages of Technology If They Can't Get Things Done & Drive Value
Success Factor: Freedom of Choice

Facilitates Org. Change
Freedom in Tech Choices

Minimal or Even No Technology Restrictions: The Freedom to Choose the Best Tools
(Warning: Necessary but Very Dangerous)
Success Factor: Enforce Standards

- Facilitates Org. Change
- Freedom in Tech Choices
- Enforce Standards (UI/UX, etc.)

Theme Consistently Reflects Branding, Accessibility Reqs., UI/UX Standards, etc.
...and Updates Need to be Applied Quickly
Success Factor: Scalability & Reliability

- Facilitates Org. Change
- Freedom in Tech Choices
- Enforce Standards (UI/UX, etc.)
- Built in Scalability & Reliability

Engagement, Revenue, etc. all Tied to Speed
Sites Must Always Meet Min. Requirements
Success Factor: Support & Maintenance

- Facilitates Org. Change
- Freedom in Tech Choices
- Enforce Standards (UI/UX, etc.)
- Built in Scalability & Reliability
- Easier to Maintain & Support

All Sites/Apps Have Support & Maintenance Costs; Unique and Brittle Systems More So
Success Factor: Security & Update Speed

Facilitates Org. Change
Freedom in Tech Choices
Enforce Standards (UI/UX, etc.)
Built in Scalability & Reliability
Easier to Maintain & Support
Security & Speed of Updates

Systems Must Be and Stay Secure
Security Updates Must be Deployed Quickly
## Success Factor: Upfront Costs

- Facilitates Org. Change
- Freedom in Tech Choices
- Enforce Standards (UI/UX, etc.)
- Built in Scalability & Reliability
- Easier to Maintain & Support
- Security & Speed of Updates
- Upfront Cost to Build Platform

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**Upfront Build Costs**

for a Platform (if any) and or Tooling

Can be Very High
Facilitates Org. Change
Freedom in Tech Choices
Enforce Standards (UI/UX, etc.)
Built in Scalability & Reliability
Easier to Maintain & Support
Security & Speed of Updates
Upfront Cost to Build Platform
Time/Cost to Launch New Apps

Launching New Apps Quickly with an Economy of Scale is Critical
Success Factor: Total Cost of Ownership

- Facilitates Org. Change
- Freedom in Tech Choices
- Enforce Standards (UI/UX, etc.)
- Built in Scalability & Reliability
- Easier to Maintain & Support
- Security & Speed of Updates
- Upfront Cost to Build Platform
- Time/Cost to Launch New Apps
- Total Cost of Ownership

Different Approaches to Building Systems Have Different Pros and Cons

Can you Have Your Cake and Eat it Too?
Systems Design vs. Obstruction
## Evaluating & Rankings Approaches

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- I’ll Identify Different Solutions
- Discuss How They Rank vs the Key Factors
- Rating Them from Great to Really Bad
- This is a Complex Topic Many Variables at Play
- I’m Making Generalizations in my Assessment
- Variations Won’t Materially Impact Outcome
One Offs Aren’t Bad, But a Lot of Them Are

<table>
<thead>
<tr>
<th>Facilitates Org. Change</th>
<th>One Offs</th>
<th>→ Difficult to Get Anything Done at Scale</th>
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<tbody>
<tr>
<td>Freedom in Tech Choices</td>
<td>Good</td>
<td>→ Just Because You Can, Doesn’t Mean You Should</td>
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<td>Meh</td>
<td>→ Difficult to Enforce; Requires People</td>
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<td>→ Varies Greatly by System, High Effort</td>
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<td>Bad</td>
<td>→ Limited to No Re-use or Sharing</td>
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<td>Release Cycles Long</td>
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<td>Costs Mandate Reuse to Recoup</td>
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<td>Diseconomies of Scale</td>
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<td>At Scale This is a Recipe for Disaster</td>
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++ Enforced Standards & Shared Components
Components & Standards Based Systems
Foster Code Reuse & Standards to Accelerate Dev & Reduce Costs

➔ Corporate/Brand Themes and Accessibility Enhancements
➔ Integration Into Internal Systems (LDAP, Search, etc.)
➔ Integration Into 3rd Party Systems (e.g., Box, Slack)
➔ Feature Enhancements (Editorial/Publishing Workflow, etc.)
➔ A Robust QA Test Suite and Load Testing Suite
➔ Easy Integration Into Internal DevOps and Other Tooling
➔ Pre-approved by Security and Other Compliance Teams
## Reuse & Tooling: Lots of Value at Low Cost

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- Jumpstart Projects, Customization Colsty
- Reuses Relinquishes Some Control
- Better Starting Point, But Hard to Enforce
- Better Starting Point, But Hard to Enforce
- Re-use Lowers Costs
- Better Starting Point, But Hard to Enforce
- Invest in Shared Tools & Components
- Still Expensive & Out of Reach of Many
- Still Very Human Driven

### Key Transformative Approach, Builds Buy-In & Support For More Change

- **Great**
- **Good**
- **Meh**
- **Poor**
- **Bad**

++ Enforced Standards & Shared Components
The Power of Components
Great First Step, Builds Trust & Support Needed to Really Transform

→ Incrementally Adopted, New Projects Build on the Past, All Benefit
→ Establish Social Norms and Internal Open Source
→ Expand to Include More Team, Groups, and Divisions
→ We Built a New Intranet Proof of Concept in 4 Weeks that WOWed!
→ It Launches Next Week & Many Departments Want the Components
→ Built Buy-in & Support Needed to Secure Funding for this Platform
SaaS Revolutionary for Specific Use Cases

Facilitates Org. Change
Freedom in Tech Choices
Enforce Standards (UI/UX, etc.)
Built in Scalability & Reliability
Easier to Maintain & Support
Security & Speed of Updates
Upfront Cost to Build Platform
Time/Cost to Launch New Apps
Total Cost of Ownership

SaaS

→ Limited to What the System Supports
→ Limited to What the System Supports
→ Inherent and Enforced
→ Inherent and Enforced
→ Lots of Sites on One System
→ Update All Sites in System Easily
→ Big Upfront Investment, Great Return
→ Biz Users Mouse Click to Configure & Launch
→ Economy of Scale Radically Lowers Costs

SaaS is Game Changing but it Doesn't Work For Every Use Case

One Offs++

Grea
Good
Meh
Poor
Bad

++ Enforced Standards & Shared Components
# PaaS With Shared Components & Tooling

## Facilitates Org. Change
- **SaaS:** Low
- **PaaS++:** High

## Freedom in Tech Choices
- **SaaS:** Low
- **PaaS++:** High

## Enforce Standards (UI/UX, etc.)
- **SaaS:** High
- **PaaS++:** Very High

## Built in Scalability & Reliability
- **SaaS:** Moderate
- **PaaS++:** High

## Easier to Maintain & Support
- **SaaS:** High
- **PaaS++:** Very High

## Security & Speed of Updates
- **SaaS:** Moderate
- **PaaS++:** High

## Upfront Cost to Build Platform
- **SaaS:** High
- **PaaS++:** Very High

## Time/Cost to Launch New Apps
- **SaaS:** High
- **PaaS++:** Very High

## Total Cost of Ownership
- **SaaS:** High
- **PaaS++:** Very High

- **SaaS++** Much More Flexibility, Fewer Restrictions
- **SaaS++** A Lot More Choice and Control vs. SaaS
- **SaaS++** Starting Points, Enforced With Tooling
- **SaaS++** Starting Points, Enforced With Tooling
- **SaaS++** Common Components Reduces Burden
- **SaaS++** Rapid Updates b/c of Common Components
- **SaaS++** Big Upfront Investment, Great Return
- **SaaS++** Common Components Reduce Costs & Time
- **SaaS++** Economy of Scale Radically Lowers Costs

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### A Great Solution, But Cost/Time Per App is Prohibitive For a lot of Use

<table>
<thead>
<tr>
<th>Case</th>
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There is No One Size Fits All Solution

Facilitates Org. Change | One Offs | One Offs++ | 1 Giant App | SaaS | PaaS | PaaS++
--- | --- | --- | --- | --- | --- | ---
Freedom in Tech Choices | | | | | | |
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No Single Approach Can Meet the Needs of a Large Organization

++ Enforced Standards & Shared Components
A Combined, Layered Approach Wins

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The Holy Grail is Obtainable and the Benefits are Very Real

++ Enforced Standards & Shared Components
SaaS Puts Business Users in Control of Tech

Projects That Couldn't Afford Sophisticated Apps Now Can

→ Very Low Cost, Highly Integrated, Very Capable
→ Business Users Self Provision via GUI Interface
→ Build off Templates, or Fully Custom Config
→ Supports Approval Processes & Dept. Workflows
→ Can Change & Improve it, Unlike 3rd Party SaaS
→ Every App/Site Benefits from Enhancements
→ Incentives Built-in: Fast, Inexpensive, No Lockin
The SaaS is Built On Top of The PaaS++

Seamlessly Graduate From SaaS as Needs Grow, or Just Start on PaaS

- Users Have Access to Every SaaS Component
- Internal Open Source Across Projects & System
- Complete Control Over Application Layer & Tools
- Teams & Departments Can Create PaaS Services
- Pay based on Usage, Get Managed Services

++ Enforced Standards & Shared Components
And the PaaS++ is Built on the IaaS++
Go as Custom as You Need, Down to the Lowest Levels

→ No Restrictions: Move to or Start on IaaS
→ Access to All SaaS & PaaS Components
→ Teams & Departments Can Create PaaS Services
→ Leverage All Infra as Code (IaC) Automation
→ Costs More to Decentivize, Still More Cost Effective vs. One-Offs++

++ Enforced Standards & Shared Components
**Proliferation of Apps & Sites Fractures**

**Info**

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- **Great**
- **Good**
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- **Poor**
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++ Enforced Standards & Shared Components
**Proliferation of Apps & Sites Fractures**

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- Facilitates Org. Change
- Freedom in Tech Choices
- Enforce Standards (UI/UX, etc.)
- Built in Scalability & Reliability
- Easier to Maintain & Support
- Security & Speed of Updates
- Upfront Cost to Build Platform
- Time/Cost to Launch New Apps
- Total Cost of Ownership

**Search Across Applications**

**Internal Directories, Universal Search Across Sites to Find Data**

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++ Enforced Standards & Shared Components

Tag1.com
## Proliferation of Apps & Sites Fractures

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**Universal Search**

**Decoupled Front Ends - Share Components, Migrate Systems**

++ Enforced Standards & Shared Components
#Tag1TeamTalks and Blogs

More About this Project and Innovations in Drupal & Web Dev

Automating Infrastructure
Tag1.com/Pulumi

Real-Time Collaboration
Tag1.com/Yjs

Performance & Scalability
Tag1.com/Goose
Turnkey IaaS, PaaS, & SaaS
Enabling Teams to Quickly Create & Launch Sites

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