Technical overview

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CTO, Upodi
Where do we fit?
# Upodi fits your existing IT tools
And help optimize our automated experience

<table>
<thead>
<tr>
<th>Business need</th>
<th>Description</th>
<th>Integration / Custom Development</th>
<th>Existing solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selfservice</td>
<td>Today, customers demand to be in control. Self service is a key resource to handle increased customer demand and link customers to subscription management.</td>
<td>Intensive</td>
<td>• Sitecore</td>
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<td></td>
<td></td>
<td></td>
<td>• Umbracho</td>
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<tr>
<td>Support &amp; helpdesk</td>
<td>Upodi support various support and helpdesk service management via extendable APIs.</td>
<td>Moderate</td>
<td>• Zendesk</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Helpscout</td>
</tr>
<tr>
<td>Financial &amp; ERP systems</td>
<td>Upodi does not substitute ERP but add-to. Billings and invoicing need to be processed, why Upodi links naturally to your ERP.</td>
<td>Moderate</td>
<td>• Dynamics 365 for Financials</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Dinero, Economic</td>
</tr>
<tr>
<td>Customer relations &amp;</td>
<td>Keeping track of customer changes and behaviour is how the modern business work. You cannot exist without a central point of customer evidence.</td>
<td>Moderate</td>
<td>• Dynamics 365 for Sales</td>
</tr>
<tr>
<td>management</td>
<td></td>
<td></td>
<td>• Hubspot</td>
</tr>
<tr>
<td>Communications &amp; chat</td>
<td>Multi-channel and modern communication across online and offline. Enable service agents to handle subscription related questions.</td>
<td>Light</td>
<td>• Salesforce.com</td>
</tr>
<tr>
<td>Subscription management</td>
<td>The Upodi platform.</td>
<td>None</td>
<td>• Zendesk</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Intercom</td>
</tr>
<tr>
<td>Supply and provisioning</td>
<td>Every service is delivered differently. Upodi is the hub between your ERP, CRM and provisioning.</td>
<td>Intensive</td>
<td>• Azure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Amazon AWS</td>
</tr>
<tr>
<td>Payment transactions</td>
<td>Supporting PayPal, Stripe, CyberSource, Braintree and other payment gateways.</td>
<td>None</td>
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</tbody>
</table>
Unified Cloud Commerce Platform

REST API

Line of Business Applications

Unified Subscription Commerce

Payment

Clearance

Workflow
Billing
Finance
Subscription

Dashboard
Intelligence

Compliance
Scale
Control
Agility
Security

99.99%
SLA

Automation
Telemetry
Usage

Experience
Portals
Store
Integration

Application
Platform
ERP
Platform Architecture
### Logical Breakdown of Platform

**Client Tier**
- API

**Unified Access**
- 1st level of encryption keys.
- Redundant datasets across two datacenters.
- API & user information.
- Geo-independent hosting.
- Data stored at rest.

**Tenant Isolation**
- Each tenant is isolated into own databases.
- Redundant datasets across two datacenters.
- 2nd level of encryption keys.
- Handled by Microsoft (Azure).
- Geo-specific hosting (i.e. Europe).
- Data stored at rest.

**Processing nodes**
- Asynchronous micro services.
- Multi-tier for scalability.
- Data is processed.
- Region based hosting to keep data in geo.

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**3rd party providers**
Outside the responsivity of Upodi

- ERP Vendors
- Payment Service Providers (PCI Compliance)

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Analytics

Correct data – every time
We have a range of options when dealing with getting data out of the platform. We have direct integration with PowerBi, Tableau, Excel to name just a few.

Data in your data warehouse
You have the possibility to connect Upodi subscription data with your existing data warehouse. We have full support for oData to expose all the data needed – when you need it. Fastest way to get data where you need it – always updated.
Developer Friendly

Documented
Upodi is fully documented using standardized JSON/REST API's. We ♥ developers.

Standardized frameworks
JavaScript SDK or NuGet for C#. We have it.

- https://github.com/upodi
- https://docs.upodi.com
Supported ERP systems
Supported ERP systems

List of most used ERP systems

- e-conomic
- dinero.
- xero
- VISMA
- Microsoft
- Quickbooks
- billy
Supported Gateways
Supported Gateways

List of most used Gateways

Do we miss one? Upodi strive to integrate with the proven vendors of choice.
Roadmap
Roadmap

Stability and Customer Driven

Near term vision

Long term vision

FY19

Introducing Upodi Subscription Graph.

Analytics & reporting through Power BI & suggestive actions.

Fraud detection hub and compliance.

FY19, FY20


Machine Learning supporting predictive and automated controls for subscription handling and management.

Acts as a global data network, interoperating all tenants to "learn" patterns and know customers through intelligent tracking.

FY18H4

Upodi Apps

Webhook enhancements.

Dashboarding.

FY19

Vision - Subscription BOT, automating the subscription management and support.
Release plan
Release planning

- Two (2) **major releases** with feature enhancements and changes. These includes the big rocks of our roadmap, requested by customers.
- Six (7) **minor releases** changes and minor enhancements and hotfixes.

See [https://docs.upodi.com/docs/releases](https://docs.upodi.com/docs/releases)
Security of Upodi
Security

Offices & physical perimeter
Upodi office locations are physical locked. Access is tracked by security cards and logged for audit.

People security
Annual audit of criminal records, initial screening of all new employees to secure compliance and trust.

Data security
Infrastructure including client desktop use anti-virus systems, conduct scans and are applied with security policies of automatically locking desktops, enforcing strict password policies and securing the use and access to data.

Upodi is build using the standard framework of security by Microsoft & Windows Azure.
Logical Security Separation

Web- & API tier
Isolated into security zone, allowing only HTTPS (TCP 443) from internet to the zone. Perimeter scan conducted on a regular basis, client scan is permitted on notification.

Processing tier
Isolated tier using web jobs. There is no external access to this tier. Tier is configured to allow communication with data tier and external 3rd parties via HTTPS (TCP 443).

Data Tier
Isolated and separated by distinct firewall policies allowing data access from web- and processing tier.

Upodi can extract data from this tier for support capabilities via jump stations.
Penetration Testing Policy

Enabling customers to provide own evidence of penetration tests.

Empowers customers with the ability to:

- Trust and Verify.
- Perform their own penetration tests of Upodi.
- Perform penetration tests of their own customizations and personalized portals.
Failsafe uptime
Real-time Health information

Alerting & announcement of maintenance
(https://trust.upodi.com)

API & WebApp uptime & response

3rd party monitoring and management
Upodi will monitor and notify clients when 3rd party issues arise with payment providers and integrational partners.
Separation of logic

- Each component of Upodi is run as a separate logic.
- Each component is a micro service.
- Integrating Upodi drives less responsibility to the integration party. Allowing fault scenarios to run optimal.

Scenario examples:
- If our API is down, customers will not be able to update changes via the API, however billing and subscription engine will not be affected. Updates can be done via the web app.
- If our billing is down, customers will be able to update changes via web app and API, and billing will resume once back up. Subscription engine processing is not affected.
- If our web app is down, customers will not be able to update changes via web but API. Billing and subscription engine is not affected.
- If our subscription engine is down, neither billing or api or web app is affected.
- If Windows Azure is down, our engines and services will resume from the time the incident occurs, in case redundancy under Microsoft controls fails to handle load balance.
How we handle credit card data & PCI
Security of card data
How Upodi comply with PCI DSS

By December 2018, Upodi have **deprecated support** for handling raw credit card data. We only support token based card processing in production.

- Strict PCI level 1 compliance is handled by the PSP.
- Upodi will comply with the SAQ A-EP PCI compliance.
- As a customer you will have to fulfil either SAQ A, A-ERP, D or QSA PCI level 1 for processing card forms in your application or website.
- As a customer, you will likely have comply with SAQ A or A-EP.

<table>
<thead>
<tr>
<th>Worth to know for your implementation</th>
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<tr>
<td><strong>Used by iframe or popup windows.</strong></td>
<td>SAQ A</td>
</tr>
<tr>
<td>Do not touch, process or store cardholder data, and do not serve any card collection forms (e.g. you use an iFrame or popup.)</td>
<td></td>
</tr>
<tr>
<td><strong>Used by token based form collection.</strong></td>
<td>SAQ A-EP</td>
</tr>
<tr>
<td>Do not touch, process or store cardholder data, but do serve card collection forms (e.g. you use embedded card forms)</td>
<td></td>
</tr>
<tr>
<td><strong>Used when storing data.</strong></td>
<td>SAQ D</td>
</tr>
<tr>
<td>Do touch, process or store cardholder data</td>
<td></td>
</tr>
<tr>
<td><strong>Used when storing data.</strong></td>
<td>QSA, PCI Level 1</td>
</tr>
<tr>
<td>Do touch, process or store cardholder data with over 6 million online transactions per year.</td>
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Payment provider (PSP) flow

End-user

Your Server or Application

Payment Provider

Upodi

End-user hits your service www.yourserver.com. Render form using HTML and portion for card data.

PSP submit only the credit card portion of the form, returning a token to the end-user PCI compliant.

Re-posting the remaining fields + PSP token to your Server.

Creating a new customer, adding a new payment method using the token

Upodi.Customers.Add(…)

Newly created Customer id

Add subscription, set amount etc. using API
Compliance
## Compliance & data protection

- Industry certified data compliance and physical security

### Upodi is build on Azure

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<th>HIPAA</th>
<th>ISO 27001</th>
<th>PCI DSS 3.2</th>
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<td>Business Associate Agreement</td>
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### EU model clauses, EU SAFE Harbor, UK IL2

- SSAE16 (SAS70 SOC1 report)
- EU Data processing agreement
- Government requirements (EU GDPR 2018)

### Multi-factor authentication
- Perimeter security
- Extensive monitoring
- Locked racks

Microsoft Azure platform adds security and extends compliance.