Aqueducts and APIs: Making History

Aqueducts – a Roman innovation – transformed the lives of the ancients for the better. Engineered in concrete (another Roman innovation), aqueducts brought drinking water to cities, irrigated farms, drained malarial swamps, improved hygiene, and set in motion countless positive ripple effects. (Two millenniums on, we have only incrementally improved on Roman recipes for cement.)

A comparable transformation is underway in the 21st century. And it also involves plumbing.

APIs - Application Programming Interfaces - are the digital "aqueducts" of our time. In the App Economy, organizations deploy them to offer, exchange, and fulfill billions of requests every day from partners, consumers, and devices. No longer on the edge of digital transformation, APIs lurk behind everything, including most web pages: Click through to reserve a table. Hail a ride. Place a bet. Share a storyboard. Host a video conference. APIs manage the requests and responses that make it happen – pretty much on demand - with no human mediation.

From Alibaba and Amazon to Uber and Zynga, APIs have become the operating system of the Internet. They transcend borders, languages, and currencies; APIs can even persevere through OS upgrades. There's big news here: APIs are having aqueduct-like impacts.

Solving the Productivity Paradox?

Let's review: for decades, we invested trillions of dollars to *computerize* workplaces. Benefits were uneven and often elusive. The offsets included rising IT acquisition and support costs owing to hyper-obsolescence, unforeseen make-work to implement frequent upgrades and resolve system incompatibilities, an iffy software/patch cycle, chronic retraining, and more.

Unlike so much of what was promised in the digital era, APIs are making possible real *automation*. That's right: APIs are actually reducing the work of providers while delivering convenience and meaningful time-savings to consumers. And it's occurring on a wide and deep scale - billions of API calls among tens of thousands of organizations every day and growing. Economists call it *disintermediation* – removing the middle layers that add time, labor, and cost to transactions. Of equal importance, APIs are delivering cost-savings to corporate and government organizations. It's simple: APIs bring a tangible value proposition to the boardroom table that CEO's can ill afford to dismiss.

A corollary of this trend is that APIs are lending fresh credibility to IT departments. It's no exaggeration to say that APIs are empowering CIO's to shape business strategy.

Getting on board the API train

It's not too late, but don't delay. (That would buy time for your competitors to swamp - or sink - your pre-API business model.)

Latecomers will be pleased by the evolution, maturity, and variety of API solutions. The price is right, too, scaling judiciously with the size and complexity of your work process. And whether you host your

own solution or lease cloud services, it's not hard to get started. Start with what you know – your workflow, your pain points, your customers, your market.

Whether you are B2B, B2C, or both, you'll be surprised how easy it is to design an API solution that is as dexterous as the customer journeys you support. (An added plus – a fresh look at your process may yield insights that streamline how you do things.) How simple is it? A typical remote gaming solution implements about 4 APIs (Launch, Init, Play, and Recon).

Like the base metals (lead, notoriously) that tainted Roman plumbing, some APIs come with hidden costs. Using open-source systems and leveraging best-of-breed tools and prefabricated implementations are some of the ways you can reap the benefits of an API makeover while minimizing costs. We've assembled a rough guide to get you started – or catch you up - in the world of APIs.