Enter Service Brokering: 5 Thought Leaders

Service Brokering 2020 and the rise of the Citizen Developer

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To paraphrase Mark Twain, "reports of central IT's death have been grossly exaggerated". Some suggest that with the continued growth of cloud services at the infrastructure, platform and application levels, central IT will become smaller and smaller, until one day, it simply disappears.

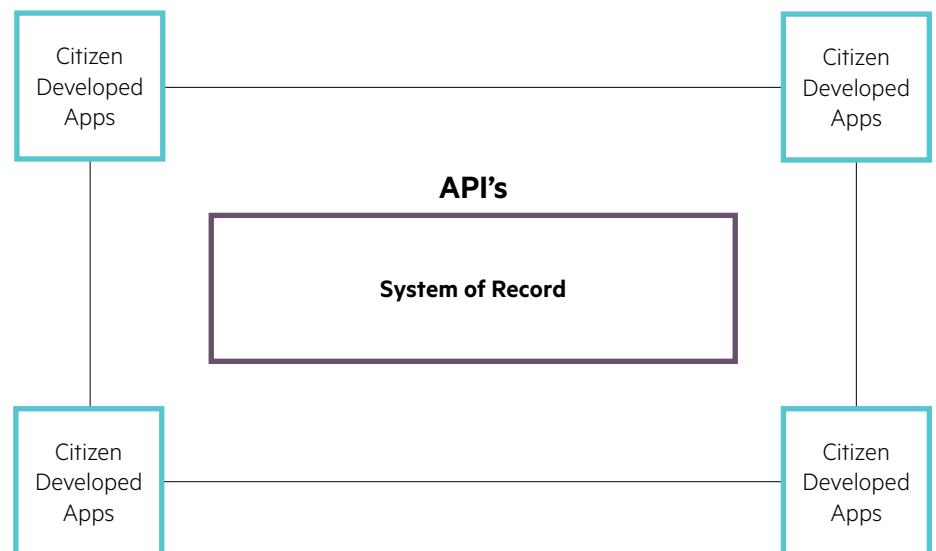Let's make a mental jump to the year 2020 and take a less pessimistic view.

Firstly, we need to stop thinking that only central IT can create applications and conduct data science. By 2020, application creation and data science will be performed by all kinds of teams within the enterprise (and outside the enterprise, for that matter). We will thus see a rise in the number of "citizen developers" who sit outside central IT, but who create applications and perform data science.

What does this citizen developer in a business team use to create their applications and data analyzes?

- They will almost certainly need access to the enterprise's all-important Systems of Record. This will be achieved through APIs. These APIs will protect the Systems of Record, allowing the citizen developer to create and analyze without doing damage to the enterprise's most important IT assets

- The applications will be plug-and-play (typically referred to as "composable apps"). The citizen developer will stitch together applications from "building blocks as a service". Some of these services will be provided by Central IT, but many will come from service providers outside of the enterprise

- The citizen developer will be able to create a development environment, a testing environment, a limited roll-out application container, and a full roll-out application container at the press of a button. Whether these environments are supplied by public cloud, by managed virtual private cloud, or by a private cloud, they are very much a function of how competitive central IT is able to make these "cloud" offerings

- Virtualized services onto APIs that do not yet exist and for those cloud services that are expensive to call repeatedly (for during stress testing, for example)

- Smart machines can be utilized by these developers to check code is safe. Citizen developers will probably be part developer, part business person, and we cannot expect them to know how to counter security threats at the application level. There is much talk in the press about how smart machines will help humans in the future. Checking the security of code is one such application of this technology

- A data science environment with the data feeds, the data lake, and the data analysis engines that the business needs, will either provide functionality within their application or analyze the performance of their application

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│ Citizen  │                              │ Citizen  │
│Developed │──────────────────────────────│Developed │
│  Apps    │                              │  Apps    │
└──────────┘        API's                 └──────────┘
     │        ┌──────────────────┐             │
     │        │                  │             │
     │        │ System of Record │             │
     │        │                  │             │
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┌──────────┐                              ┌──────────┐
│ Citizen  │                              │ Citizen  │
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│  Apps    │                              │  Apps    │
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🔍 Citizen Developed Data Science

So, our citizen developer will be calling APIs onto the Systems of Record and will be using "building blocks as a service", typically from external cloud providers. Can these citizen developers use any "building blocks as a service" provider? Yes and no. For those very innovate, leading-edge groups whose applications are highly experimental, it is likely they will be trying out providers that nobody in the enterprise has used before. But for the majority of citizen developers, they will choose building blocks from a catalog provided by the enterprise.

About the author

Mike Shaw is a member of the HPE Software Strategic Marketing team creating thought leadership in the areas of Big Data, the Enterprise of the Future, and the Digitization of Everything and Bimodal IT.

Mike joined HP (now Hewlett Packard Enterprise) 30 years ago. He has been

- an R&D section manager working on Business Process Management product (during which time he gained the accolade of HP Distinguished Engineer)
- lead a Software business planning team
- manager of world-wide marketing for Software Business Service Management products
- a key contributor to Enterprise 2020, a HPE project to define the enterprise of the future (**enterprise2020.com**)

Mike has a degree in Physics from the University of Manchester and a Masters in Control Engineering and Operations Research from Cambridge University.

Mike lives in the United Kingdom.

In our world of citizen developers, the catalog becomes very important. What does this catalog contain?

- Available APIs onto the Systems of Record

- Entries for development environments, testing environments, limited roll-out application containers and full roll-out application containers

- Testing as a service. This may be for testing against hundreds of mobile devices, against a range of Internet of Things, and most certainly, to test the security of the application code

- Virtualized services for APIs that do not yet exist, or for expensive cloud services that cannot realistically be hammered in, say, a performance test

- A data science environment typically including a Hadoop-like data lake, a high-speed analysis engine, a human-interaction information analysis engine, and the latest data science tools for analyzes like prediction and machine learning

- The external "building blocks as services" that the enterprise considers safe for the citizen developers to use in their applications

The citizen developer / citizen data scientist is coming; rather than central IT trying to hold back the tide, it is much better that it put in place the environment in which the citizen developer can thrive. Put in place the APIs, the cloud services that the developers and data scientists need, the security testing system, and the supplier relationships for building-blocks-as-a-service.

Once you have all this, they should put it all into a single catalog so that it is frictionless for the citizen developer to order any of these services.

Back to those predictions about the death of central IT. Yes, services that are not core to the enterprise will go out to SaaS as described in Geoffrey Moore's core/context model (ref). Some people in central IT today will "climb out from behind the service desk" and join business teams as developers and data scientists. And the remainder of those in central IT will be busy putting APIs around the Systems of Record, bringing the cloud to the necessary dev, test, virtualization, run-time and data science services, and certifying the building-block-as-a-service suppliers that the citizen developers need.

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