Extending the Reach of Enterprise Developers

Keeping up with software growth and the needs of senior leaders is never an easy task, but that's a day in the life of the developer. InfoWorld's **"The Rise of the Developer"** Tech Persona finds a quiet revolution in the software development space, with a focus on learning, leadership and communications.

Software Developer. Software Engineer. Application Developer. Programmer.

The words we use to describe the software developers who work in corporate settings are always changing, even if the mental images those titles conjure do not. We think of Peter Gibbons, the melancholy programmer from the now cult film *Office Space* toiling away in his cubicle at Initech and buried under a pile of "TPS reports." Or we imagine "Richard" from HBO's series *Silicon Valley*: a brilliant engineer grinding away unnoticed in the ranks of Silicon Valley giant Hooli.

But in an economy in which software powers businesses operations and economic growth alike, these technical leads are more important than ever to the success of the companies that employ them. In response, the workplace is undergoing a quiet revolution, as "programmers" like Peter Gibbons are transforming from mere functionaries working in the belly of the beast to central figures with lines of communication to business leaders and responsibility for translating the needs of the business into the tools, technologies and code that will keep their employers lean, smart and efficient.

In fact, a recent InfoWorld survey of these "enterprise developers" finds that they are wearing more hats than ever before within the organization: as thought leaders, collaborators and mentors, with a new focus on learning, leadership and communications that would have been unheard-of even 10 years ago.

What's in a Name?
(Answer: Not Much.)

What do we call these "renaissance" developers? What titles do they carry within the organizations they are helping transform? "Enterprise developer," as a term of art, is uncommon. But the findings of our survey suggest that the answer to these questions doesn't matter as much as we might think – at least to the individuals doing the work.

Developers are wearing more hats than ever before within the organization: as **thought leaders**, **collaborators** and **mentors**, with a new focus on **learning**, **leadership** and **communications** that would have been unheard-of even 10 years ago.

The information technology professionals we surveyed were all over the map when it came to the question of what title best described the job they performed day-in and day out. A bare majority of respondents to our survey identified themselves with the roles of "Senior/ Software Developer" (31%) or "Senior/Software Engineer" (20%), with some variation depending on the size of the organization they worked for. We found a noticeable difference, however, in how younger versus older developers described themselves. The "Software Developer" title was the most frequently selected by workers who were younger than 45 years old (26%). Among developers older than 45, "Software Architect" was the title that they chose the most often to describe themselves (21%).

Not that our respondents were hung up on titles. In fact, just 20% of those we surveyed held the title of "Software Developer" or "Senior Software Developer," even though 31% reported that those were the titles that best described what they do. Still, a strong majority (76%) of developers told us they felt their job title was an accurate reflection of the work they do. The lesson? Titles matter less to this group than being recognized for the work they do.

A drive to attain specific titles may simply be a relic of a bygone era, when corporate hierarchies were more stable and the climb up the corporate ladder was a more predictable journey. As Dave, an application developer at leading U.S.-based maker of industrial equipment noted, the fluid nature of the modern workplace makes that kind of predictability impossible, while the days of IT workers having well-defined roles, responsibilities and "turf" are over.

76% Say that their title is an accurate descriptor of what they do in the course of a day.

"It's one of the things we have always struggled with, what are the titles of this and that ... you know?" he said. "What I've noticed ... is more and more things need to communicate and function together. The days where I just built something standalone are dwindling. I need to be able to understand how to hook into or to receive input for all these different pieces, which becomes an enterprise product. The days where just knowing one thing are greatly reduced... you can't be one-sided or, you know, narrow-focused on one particular thing."

Doing More with Less ... and Faster

What is clear from our survey is that enterprise developers are wearing more hats and doing more with fewer resources than ever before. Asked to list the top challenges they face in their job, developers cited doing more with less staff (29%), keeping up with new technology/changing skill requirements (29%) and uncontrolled growth in project requirements (28%) among their top five-workplace challenges.

TOP CHALLENGES RELATE TO TIME & SKILLS	
Doing more with less staff	29%
Keeping up with new technology advancements/changing skill requirements	29%
Scope creep/uncontrolled growth in project requirements	28%
Not enough time to complete tasks	26%
No clear definition of project objectives/requirements up-front	25%

Behind these numbers lie changes both in the larger economy and in the structure of development organizations. New development and operational methodologies like agile development and "DevOps" are transforming how the enterprise developers we spoke with do their jobs.

> **Communication is key in … connecting to the different people within the business, you know, whether it's sales, service, legal, marketing, you name it. You have to be involved and do that."**
>
> **DAVE**, AN APPLICATION DEVELOPER

Fast-moving agile development methodologies, for example, are replacing older "waterfall" approaches to software development in many of the organizations where our respondents worked. That has made development work more stimulating and removed a lot of the rote work of requirements and specification development that used to bog down development teams.

But approaches like agile, which rely on narrowly focused "stories" to explain specific features and short-term development "sprints" demand more and more frequent interactions between enterprise developers and their "customers" – the employees who will use the software they create.

"Communication is key in … connecting to the different people within the business, you know, whether it's sales, service, legal, marketing, you name it," Dave told us. "You have to be involved and do that."

Similarly, the impact of the adoption of DevOps methodologies within our respondents' workplace was also evident in their response. DevOps emphasizes interaction and cooperation between software development (dev) and IT operations (ops). It is becoming standard in many enterprises that maintain internal software development operations. Most of our respondents were familiar with it, and had positive associations with DevOps, linking it to the ability to gain time (41%), more positive interactions with IT operations (38%) and accelerated time to production (38%).

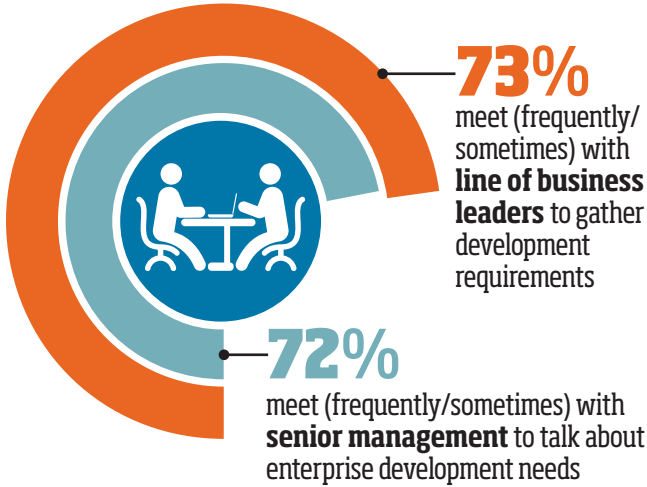## Advise and Counsel: Enterprise Developers Extend Their Reach

So what are enterprise developers doing with their time? No surprise: the vast majority of them report that the work they spend the most time on is developing (50%) and maintaining (51%) software applications. More than 45% of the developers we surveyed said they were either designing, developing or maintaining software "frequently." And more than 80% said they were doing so "frequently" or "sometimes."

WHAT MAKES UP THE DEVELOPER ROLE?		
1	Modifying/maintaining software	89%
2	Troubleshooting development issues	86%
3	Developing software	83%
4	Designing software	82%
5	Researching new tools and solutions	82%

73% meet (frequently/sometimes) with **line of business leaders** to gather development requirements

72% meet (frequently/sometimes) with **senior management** to talk about enterprise development needs

But you'd be wrong if you took those kinds of statistics to mean that the work developers are doing was one-dimensional. Many of the IT professionals we interviewed also told us they were spending a significant amount of time interacting with business leaders within their organization. For example, seven in ten listed meeting with "line of business" leaders to gather requirements or recommend solutions as part of their responsibilities (73%). Seventy two percent said that they meet with senior management to talk about enterprise development needs.

Enterprise developers these days are often stakeholders within the organizations that employ them: with visibility all the way up to senior management when it comes to evaluating new technologies and advising the company on technology purchases and investments. More than a third of respondents (35%) said their work responsibilities included researching applications. Close to a quarter (23%) said they were also called on to purchase software applications. And the individuals tasked with those responsibilities were more likely to be meeting with senior management, our survey found.

> **There is a little bit of everything. You know training people, solving problems … There is a lot to do. They keep us busy."**
> **MIKE**, AN APPLICATION DEVELOPER

"Mike," a 16-year employee of a major cosmetics maker was typical of the developers we interviewed who found themselves working far afield from strict application development and support. Nominally a "software engineer," Mike described for us a job that was rife with responsibilities outside of straight application development and support. Rather, Mike described himself as a kind of utility infielder, responsible for supporting the work of more than 100 sales people scattered across the country. His job entailed everything from researching and testing new software applications to end user training to interactions with vendors. "There is a little bit of everything. You know training people, solving problems...There is a lot to do. They keep us busy."

The growing demands on developers like Mike to advise management and mentor colleagues has created a broad recognition among enterprise developers that mere technical acumen isn't enough to guarantee professional success. Asked to name the most important skills that you need to be successful in your current role, our respondents listed soft skills like problem solving and troubleshooting (59%), communication and collaboration (48%), industry knowledge (44%), project management (39%) and team leadership (38%). That was especially true of those respondents who said their jobs require them to interact with their senior management team.

TOP 5 IMPORTANT SKILLS FOR SUCCESS

1	Problem solving/troubleshooting skills	59%
2	Communication/collaboration	48%
3	Industry knowledge (your organization's industry)	44%
4	Project management skills	39%
5	Team leadership	38%

Mind the Age Gap?

As with other aspects of the job, however, we noted significant differences in the experiences of older and younger developers working within the enterprise – a hint that the experience of enterprise developers in the workplace may be quite different depending on who is answering the questions.

For example: younger workers (under age 45) we interviewed are more likely to be involved in application development than their older colleagues (97% compared with 81%), while older developers (age 45+) were almost twice as likely to be occupied doing maintenance on already developed applications (75%) than developers younger than 45 (40%). Older developers were more likely to report feeling rushed – as if there was not enough time to complete projects. Thirty three percent of enterprise developers over the age of 35 feel they do not have enough time to complete tasks, while just 14% of their colleagues under the age of 35 felt that way.

Younger developers appear to be carving out a more collaborative role than their older colleagues within the leadership of their employer. Enterprise developers under the age of 35 reported a measurably larger role working with business leaders. Forty percent of developers under 35 said they regularly met with line of business leaders to recommend solutions, compared with just 24% of their colleagues over the age of 45.

A similar pattern emerged when developers were asked about opportunities to mentor younger colleagues. Forty percent of developers under 35 reported doing so, compared to 26% of developers over the age of 45.

Developers under age 35 are more likely to report that they frequently ...

Meet with line of business leaders to recommend solutions
40%
VS. 24% AMONG THOSE AGES 45+

Mentor junior staff
40%
VS. 26% AMONG THOSE AGES 45+

Make the business case to senior management for new tools & solutions
36%
VS. 20% AMONG THOSE AGES 45+

82% of those <45 years old report they frequently or sometimes meet with senior management to talk about enterprise development needs.
VS. 57% AMONG THOSE AGES 45+

Conclusion:
Managing the Transition

What does this all mean? The results of our survey and in-depth interviews with enterprise developers suggest that many are experiencing something of a renaissance in the workplace. As the skills they have become more central to the success of their employers, the developers we spoke to reported that their jobs were more varied than their titles might suggest. Agile development methods and DevOps-focused management mean interactions with managers, executives and the employees who use their technology are frequent. That has added spice and variety to the once stifling job of enterprise developer.

Our respondents were called on to contribute to the success of their employers' business in ways that previous generations of software engineers could have scarcely imagined, but the burden of that responsibility showed.

Still, the developers we spoke with were hungry for new experiences and the opportunity to learn on the job. Modifying and maintaining existing software may be one of the most common activities our respondents were tasked with. But it was also something they expressed wanting to spend less time doing within the next 1-2 years (24%).

What would they like to do? Develop (44%) and design (39%) new products were a top choice for our respondents, as were researching new tools and solutions (41%) and learning new development languages (42%). In a time of wholesale change, it seems, companies that are not only willing to listen to the counsel of their enterprise developers, but also to invest in them and their futures will be in the best position to reap the benefits of their work.

To review a PDF of results from this study, contact Sue Yanovitch, VP, Marketing for IDG Enterprise at syanovitch@idgenterprise.com.

About our survey

The Rise of the Developer study uses a mix of qualitative and quantitative research to understand today's enterprise developers. Telephone interviews were conducted with respondents recruited from among the developer community. In order to be included among the qualified completes, respondents were required to be involved in developing and/or modifying software applications. The learnings from the qualitative research helped to inform the quantitative research development.

The follow up qualitative research was a 20-question online survey was fielded across the IDG Enterprise audience and the results are based on a total of 290 qualified completes. Our respondents represented a broad range of industries including manufacturing (28%), high tech (20%), financial services (10%), government (7%), and business services (6%). They came in almost equal measure from small and large companies. Forty-two percent of respondents said they were employed by organizations with fewer than 1,000 employees while 56% reported working for employers with more than 1,000 employees.

Examining the Marketplace

We think research is invaluable in helping to connect marketers with customers and prospects. Our research portfolio explores our audiences' perspectives and challenges around specific technologies, examines the changing roles within the IT purchase process, and arms IT marketers with the information they need to identify opportunities. **To review the presentation of full results from any of these studies, contact your IDG Enterprise sales executive or Sue Yanovitch, VP, Marketing for IDG Enterprise at syanovitch@idgenterprise.com.**

Buying Process

Each year we take a deep dive into the enterprise IT purchase process to learn more about who is involved and who influences decision-making, what sources purchasers rely on to keep up to date with technology— and throughout the purchase process—and how they feel about the vendors they're working with.

- ### Role & Influence of the Technology Decision-Maker
  The annual IDG Enterprise Role & Influence of the Technology Decision-Maker survey is conducted to gain insight into the evolving role and influence of IT decision-makers in today's corporations. The research examines the involvement of IT decision-makers during each stage of the IT purchase process and the primary influences and information sources they rely on throughout the purchase process.

- ### Customer Engagement
  The IDG Enterprise Customer Engagement survey looks at the role content consumption plays in the purchase process for major technology products and services, and provides insights to IT marketers to map their engagement touch-points to customers information needs. The survey looks at how a wide variety of content types are used throughout the individual stages of the IT purchase process and how that content is consumed, discussed and shared.

Technology Insights

Each year we explore the technologies that are top of mind among our audiences to understand the business challenges, drivers, and adoption within the enterprise. Each research study is designed to help IT marketers understand what their customers are focused on and where the market is moving.

- ### Role & Priority Studies
  CIO Magazine Tech Poll: Economic Outlook
  CIO Magazine Tech Poll: Tech Priorities
  CIO/CMO Partnership
  Computerworld Forecast Study
  Cyber Security Watch Survey
  Global Information Security Survey
  State of the CIO
  State of the CSO
  State of the Network

- ### Technology Specific Studies:
  Big Data & Analytics: Insights into Initiatives & Strategies Driving Data Investments
  Cloud Computing: Key Trends and Future Effects
  Consumerization of IT in the Enterprise
  The Mobile First Enterprise
  Unified Communications & Collaboration

Customer Journey Poster

Want to know which content drives IT decision-makers and fuels their engagement during the IT purchase process? IDG Enterprise's Customer Journey poster serves as your content marketing guide to strategically reach your target customers.
Request a copy of the poster at www.idgenterprise.com/report/customer-journey-poster

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- Sign-up for IDG Enterprise's monthly MarketingFit newsletter and receive our proprietary research, product and event information, and relevant content from across IDG Enterprise brands direct to your inbox. Go to **www.idgenterprise.com/#newsletter**
- To get results from IDG Enterprise research when it happens, or any other news, follow us on Twitter: **@IDGEnterprise**
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