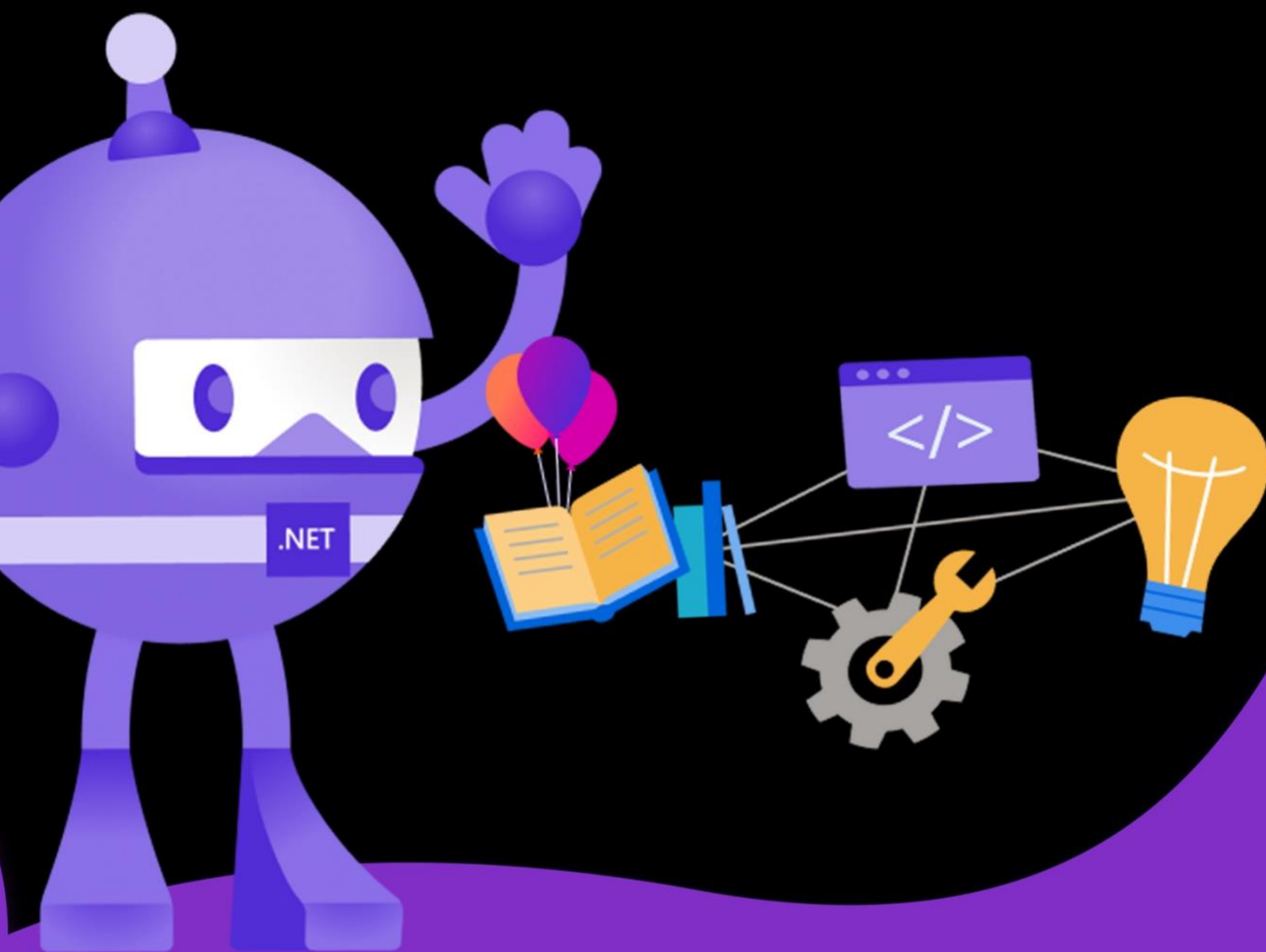


# .NET Developer Ecosystem Survey Report in China (2021-2022)



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# .NET Developer Ecosystem Survey Report in China (2021-2022)

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## Foreword

In order to know about the development status of .NET and .NET developers in China further, the .NET Conf China Organizing Committee specially launched this .NET Developer Ecosystem Survey in China(2021-2022). We hope that we can gain an in-depth understanding of the development status of .NET technology in China and the ecosystem of .NET developers, and explore the open-source road of .NET in China through this survey.

In response to the survey results, we invited several experts in the field of .NET technology to make a professional interpretation and analysis of the development status of .NET and .NET developers reflected in this survey.

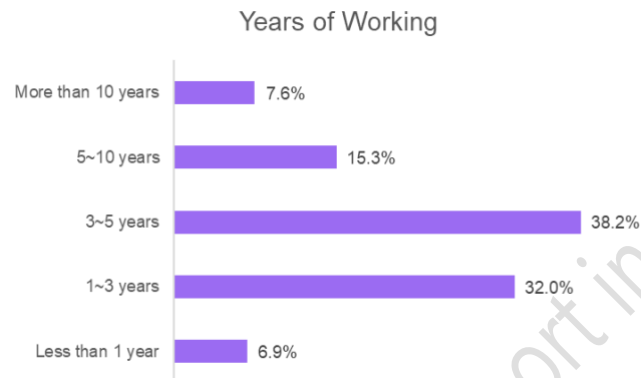
A total of 4105 pieces of data were received in this survey. The results are as follows:

(\* The results of this survey are based on **4,105** feedbacks received, and only objective analysis based on the samples received)

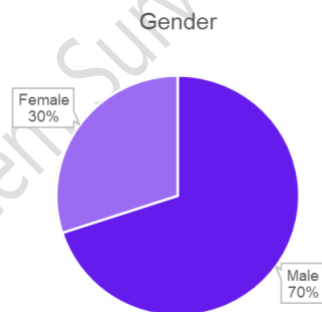
## Survey Results

### Part I: Personal and Company Information

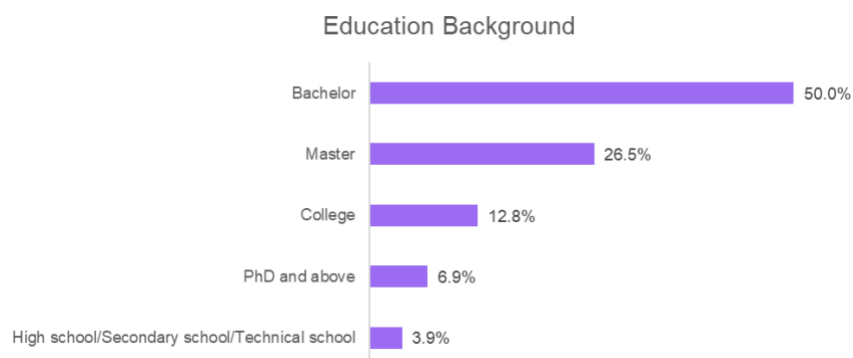
#### Years of Working



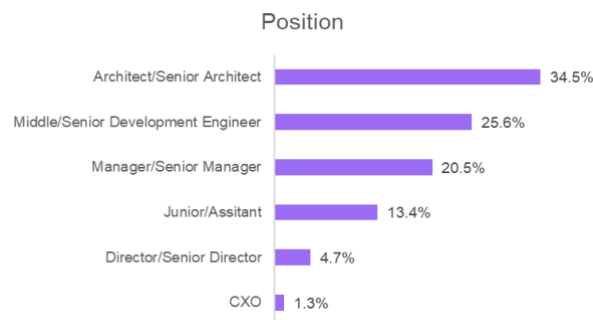
#### Gender



#### Education Background



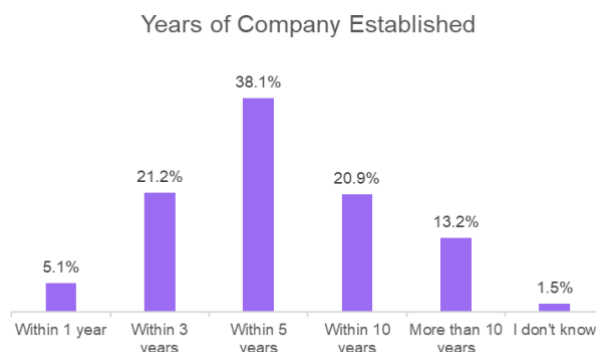
## Position Level



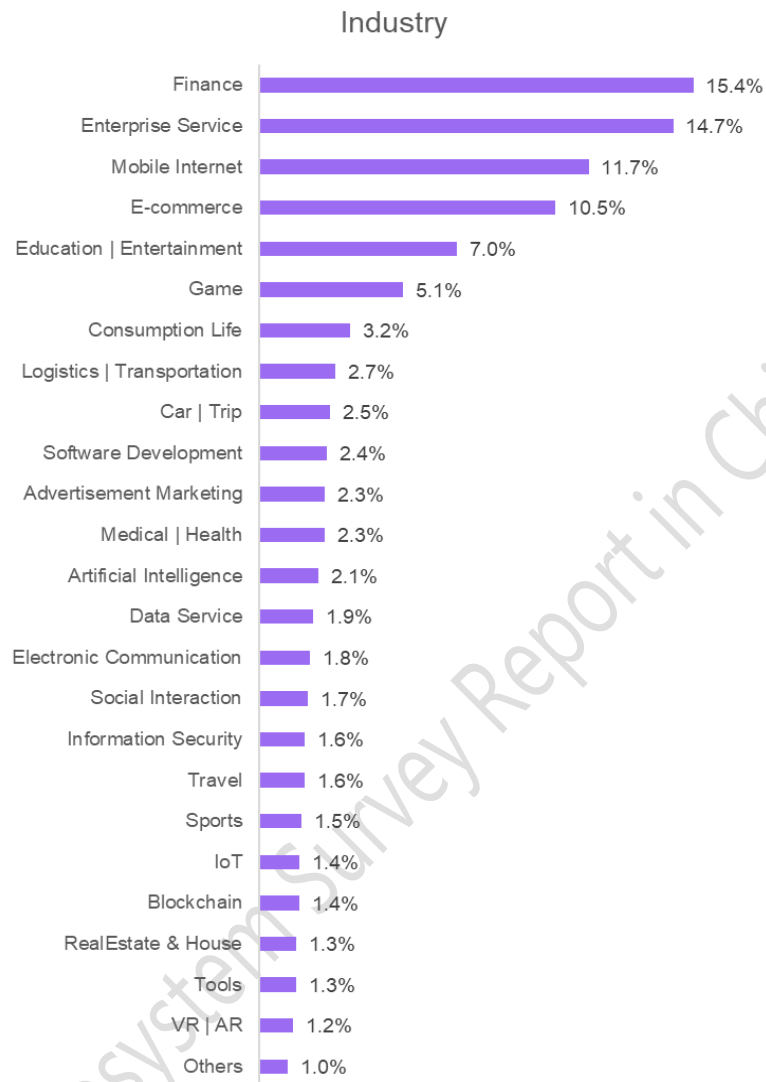
### Expert Comment: Guoshi Huang - Senior Architect of ZTO Express

26.5% of the respondents are engaged in technical management, and another 34.5% are engaged in architecture, indicating that most .NET development teams are relatively small, an old hand with a few dogfaces can form efficient combat effectiveness, and can quickly form the teams's own technical accumulation to avoid technical fragmentation, which is very suitable for startups. 61% of the high-level positions give .NET developers a lot of space for improvement. Expect more developers to choose .NET technology stack in the future.

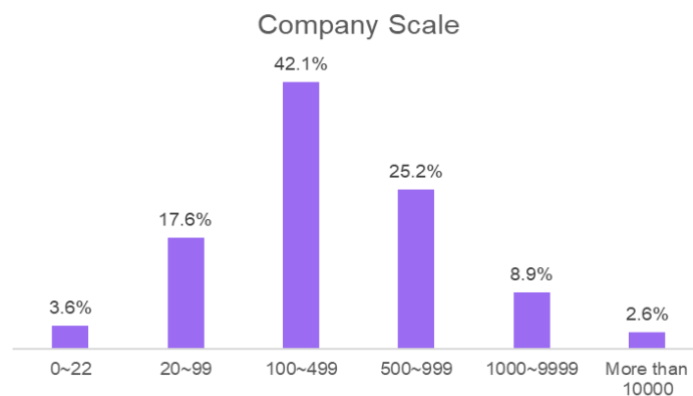
### How many years has your company been established?



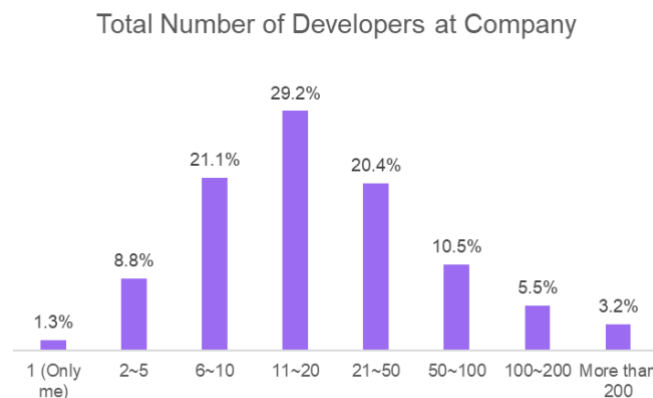
## Industry Field of Your Company



## Company Scale



## Total Number of Developers at Your Company

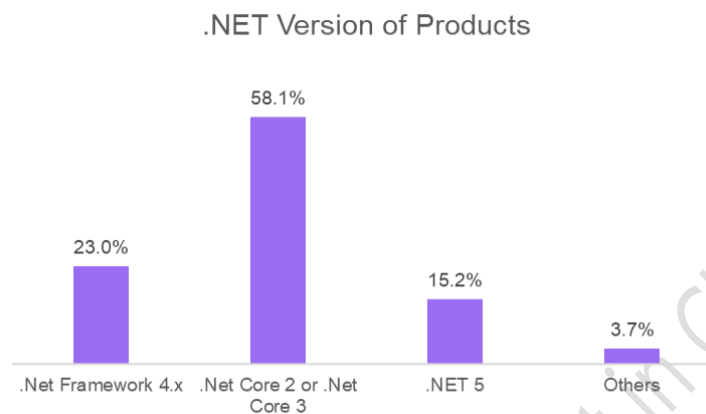


### Expert Comment: Shanyou Zhang - Founder of Shenzhen Youhaoda, Microsoft MVP

According to this survey, 80% of the company scale is concentrated in small and medium-sized companies with less than 100 employees, and 65% of them have been established in the last 5 years. 70% of companies have adopted .NET Core in their products, and 80% have adopted container technology. The respondents rarely work overtime, indicating that companies adopting .NET new technologies are innovative startups. Many early companies that adopted .NET technology turned to other technologies. .NET is now the first choice for these startups due to its high performance, high efficiency, and high scene coverage. Looking forward to more companies adopting .NET technology to build their business in the future.

## Part II: Technology Stack Related Information

### .NET Version of Company's Products



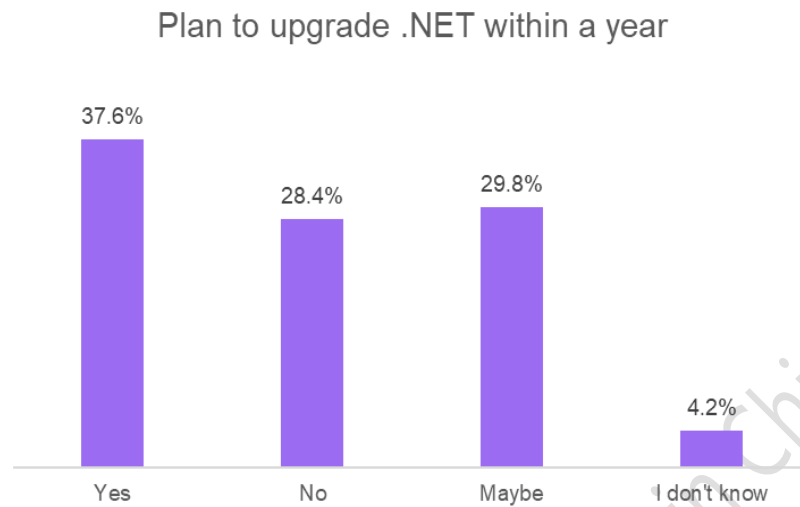
#### Expert Comment: Guangpo Zhang - Founder of Beijing Panshi

##### Huanya Technology, Microsoft MVP

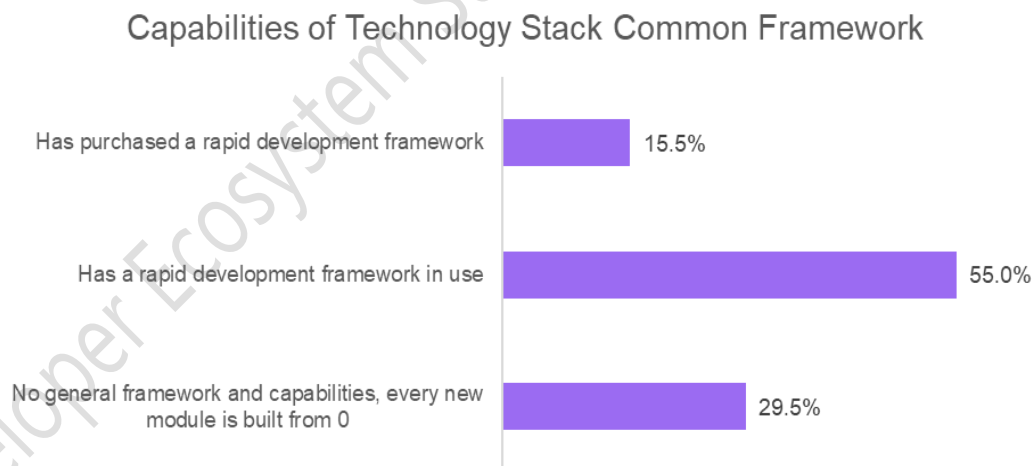
The current survey results show that, nearly 60% of companies use .NET Core 2 or 3, the technology stack that Microsoft does not support or will not support anymore in a short time, and even 23% of companies .NET Framework 4.x, an older technology stack, this is most likely a historical reason. .NET still need to be promoted, so that more companies dare to upgrade their projects, and new projects dare to use the new .NET 6 to build. A saying that many people often say is that, the products of Microsoft are not stable, we should wait for them to be stable. This concept may also be one of the reasons for the lack of the application of the new framework, which many people are watching. Hope more companies can follow Microsoft's technical development roadmap and build the .NET ecosystem together.



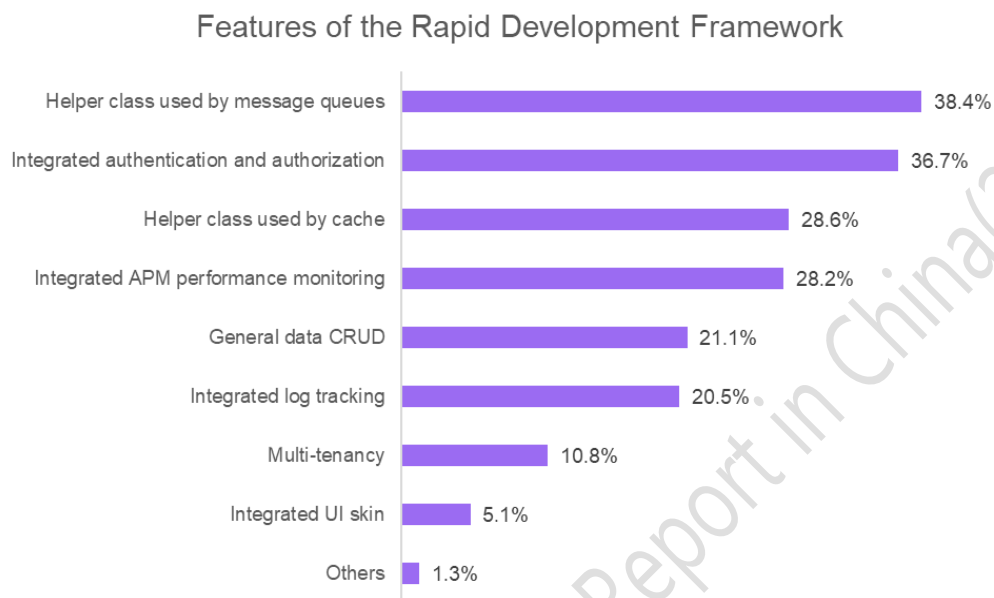
## Is there any plan to upgrade .NET within a year?



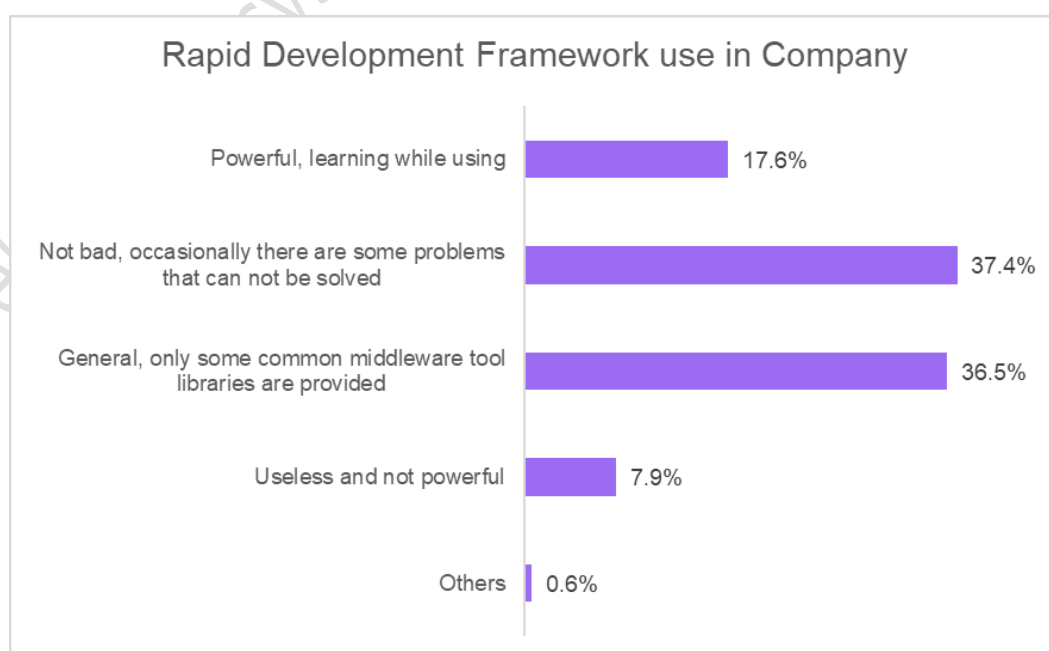
## Capabilities of Technology Stack Common Framework



## What features are included in the rapid development framework your company is using?



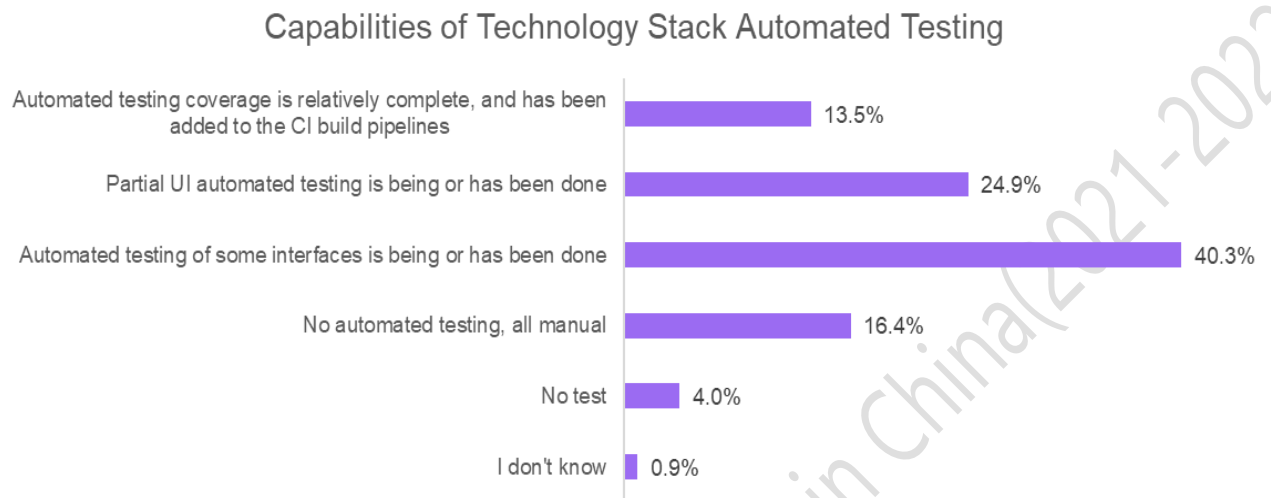
## What do you think of the rapid development framework your company is using?



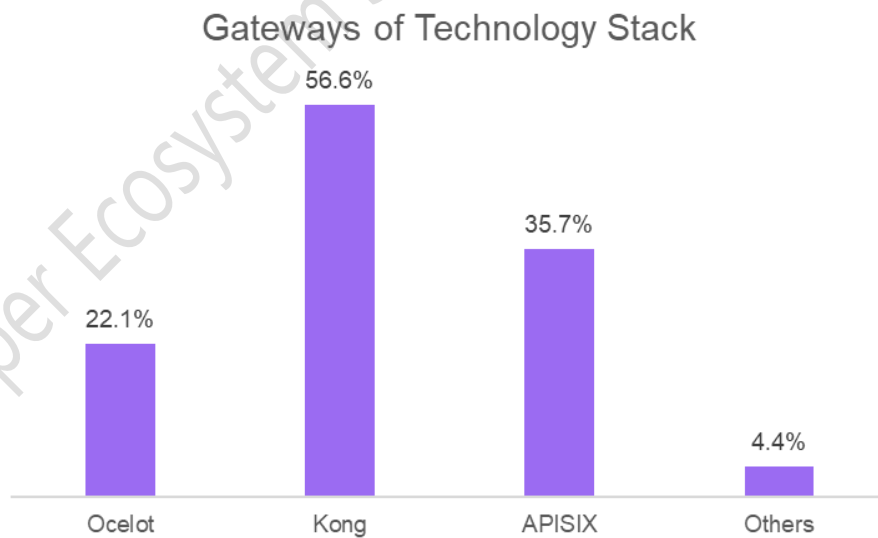
**Expert Comment: Zhenwei Su - Founder and Chief Architect of Senparc Network, Microsoft RD, Microsoft MVP, Chairman of Suzhou Microsoft Technology Club**

At present, more than 40% of the respondents' companies have not found or deeply used rapid development frameworks, and nearly 30% of the teams have neither used nor been able to build modular frameworks. Therefore, they need to build from 0 every time. In this process, the team wasted a lot of manpower to reinvent the wheel, and lost many opportunities for deep iteration. Among the developers who have used rapid development frameworks, the number of teams who have found and used them proficiently is also relatively small. Only 17.6% of them think they have found powerful rapid development frameworks and are learning while using them. A mature, reliable and highly modular rapid development framework is crucial to the entire .NET application ecosystem. On the one hand, it allows developers to focus on business and spend more energy on breaking through more difficult business scenarios and innovations. On the other hand, with the popularity of microservices and cloud-native development, rapid development and modular reserve and iteration capabilities will also become one of the core competitiveness of the development team, especially in the current international background, to develop and promote domestic excellent rapid development frameworks and open source components is also the key point that the development of .NET community must pay attention to.

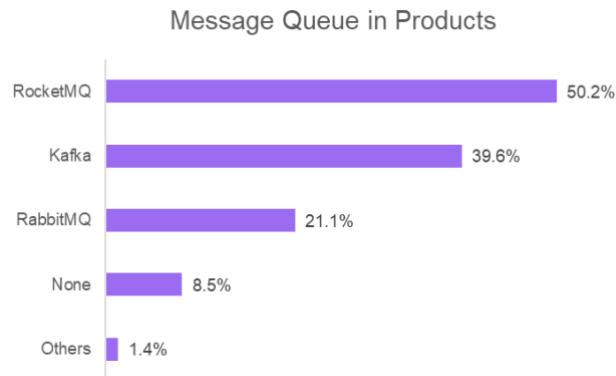
## Capabilities of Technology Stack Automated Testing



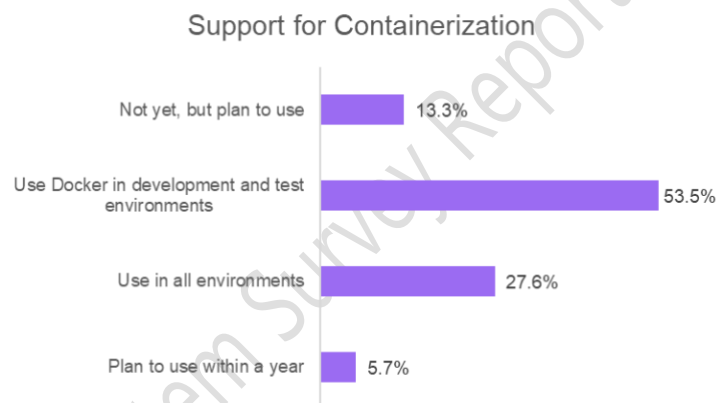
## Gateways of Your Technology Stack



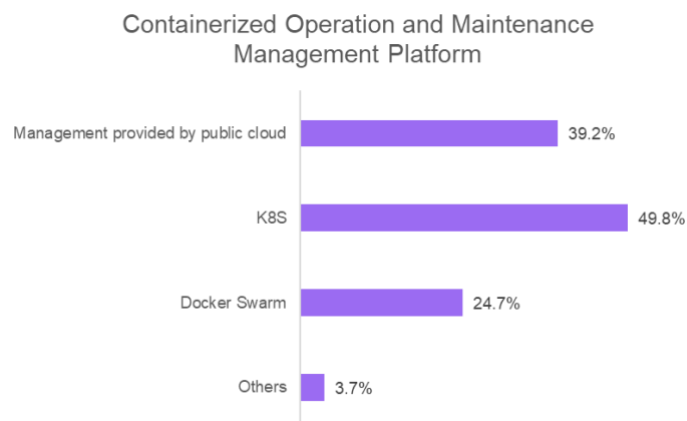
## Message Queue of Your Company's Products



## Support for Containerization



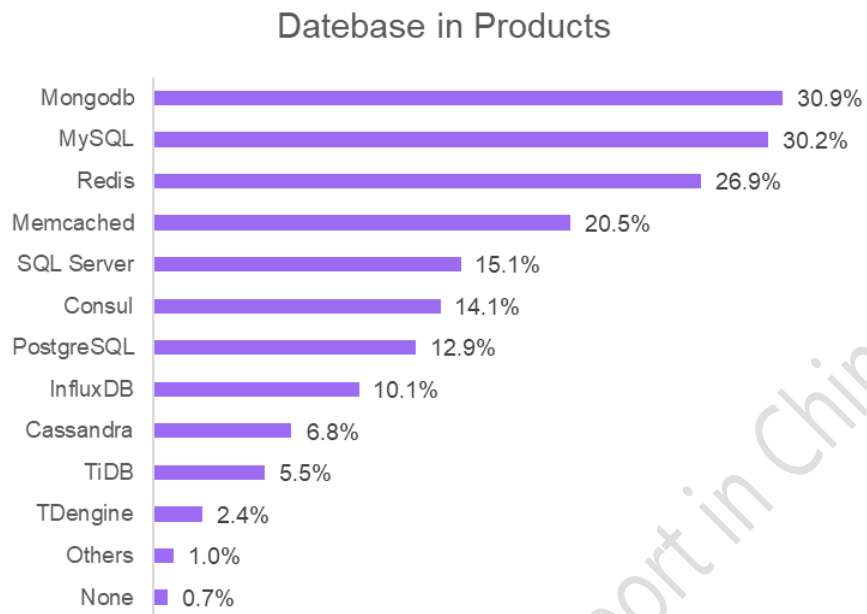
## Containerized Operation and Maintenance Management Platform



**Expert Comment: Jijie Chen - Senior Cloud Native Architect at Tencent**

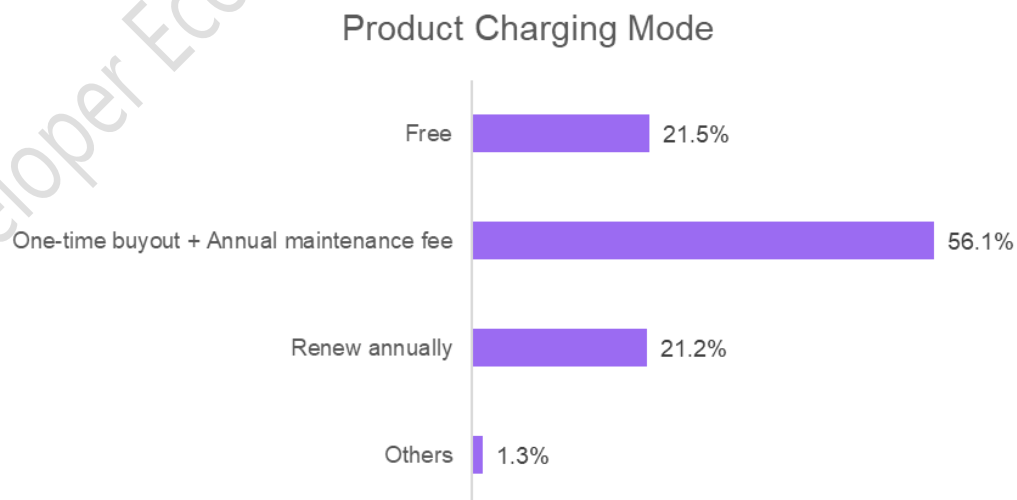
The containerization development and operation of .NET Core applications are very easy. From the survey results, it can be seen that more than 81% of the surveyed projects are using containers as their running environment. In the field of container cluster platforms, Kubernetes has become the default choice, but only 50% of .NET applications choose it as their operation maintenance management platform. This shows that, in addition to the fact that some projects do not need to introduce Kubernetes due to their small scale, the complexity of the Kubernetes itself also brings a considerable threshold to its implementation. In order to give full play to the significant advantages of .NET such as lightweight, high development efficiency and high performance, under the new trend of application development towards microservice and serverless, .NET developers should pay more attention to the automated testing capabilities, continuous delivery capabilities, and scale operation and maintenance capabilities integrated with the infrastructure of applications.

## Datebase of Your Company's Products

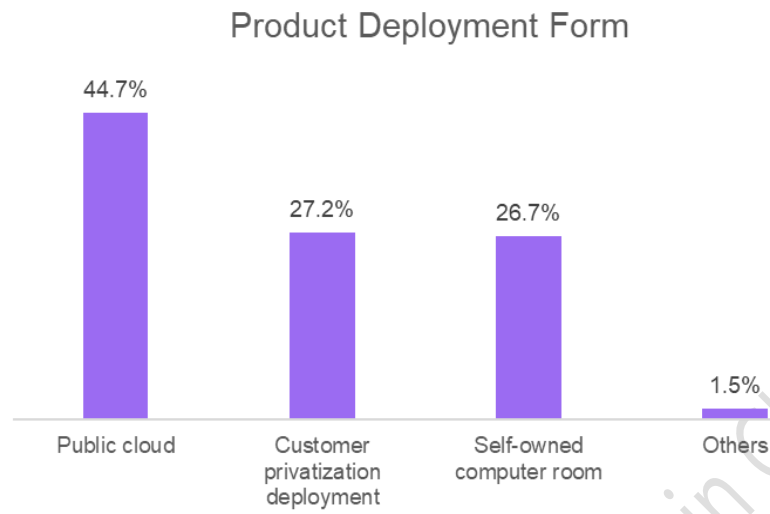


## Part III: Company Product Information

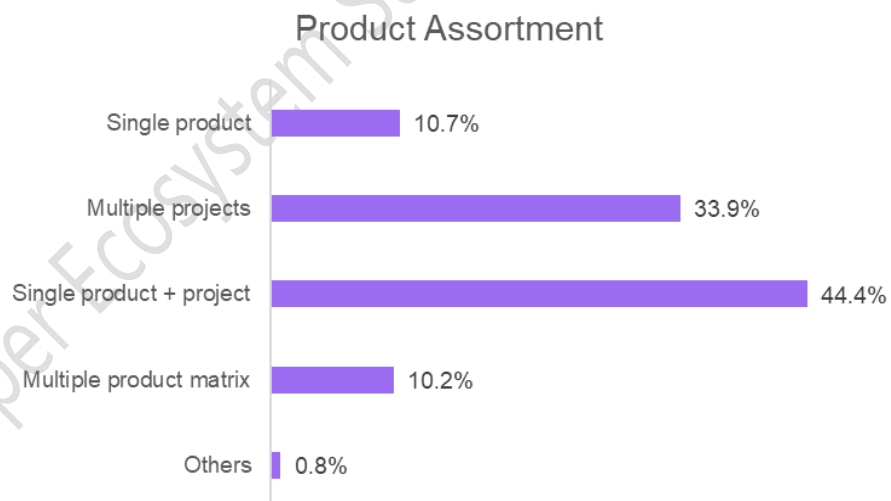
### Product Charging Mode



## Product Deployment Form

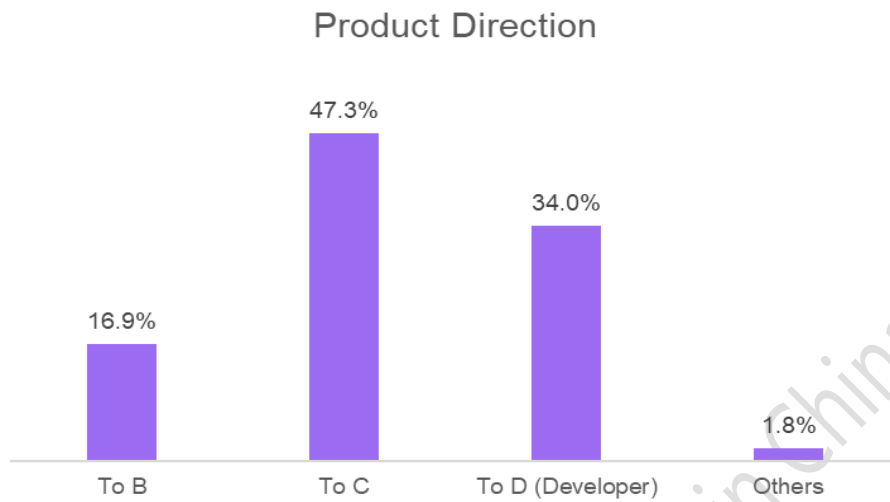


## Product Assortment

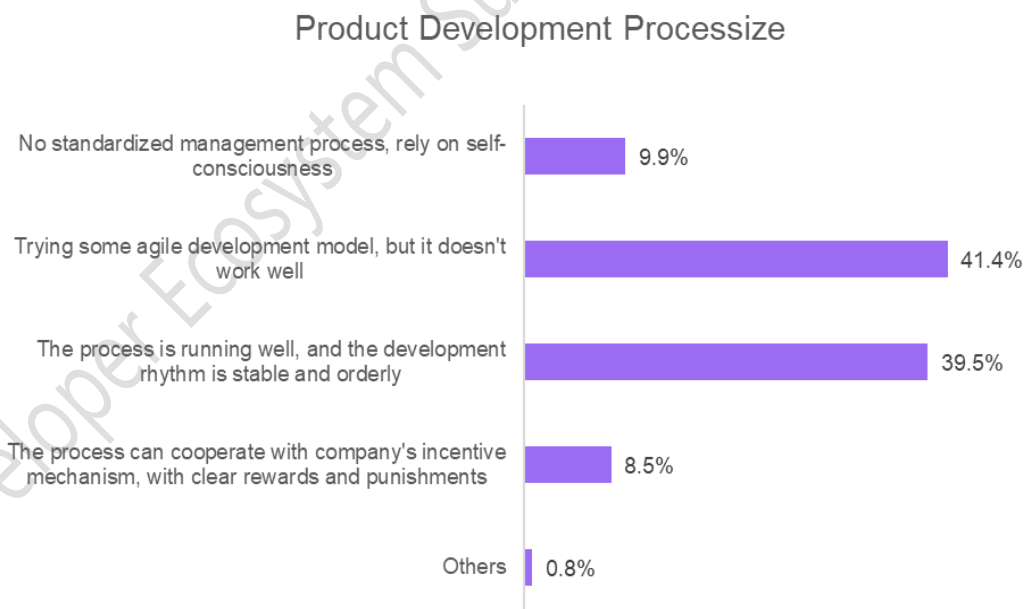




## Product Direction

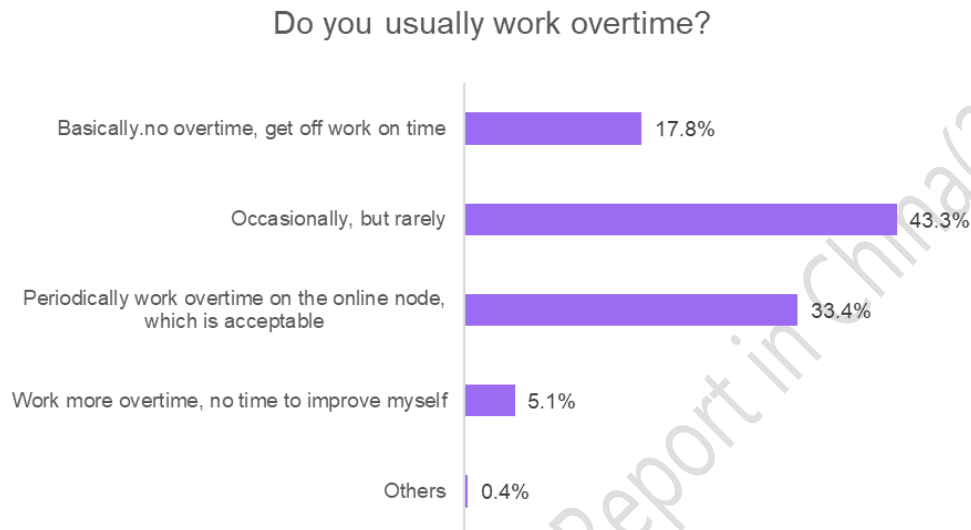


## Product Development Processize



## Part IV: Personal Development

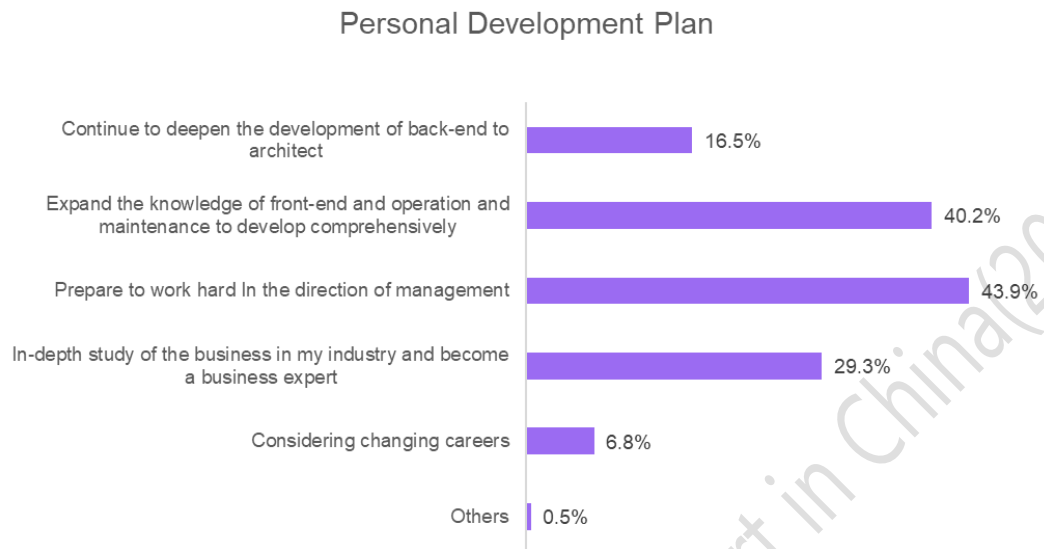
### Do you usually work overtime?



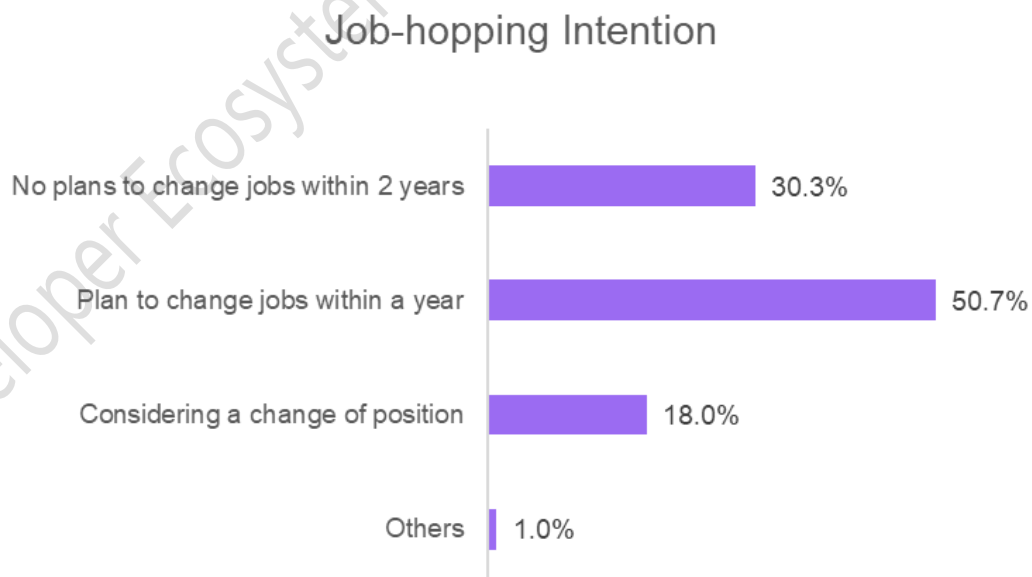
### Personal Satisfaction



## Personal Development Plan



## Job-hopping Intention



## **Expert Comment: Tengfei Liu - Founder of Shanghai Ulprotron**

### **Network Technology**

#### **Subversive piont of view:**

From the perspective of years of working, 0-3 years accounted for 40%, which is different from our original understanding. Many people felt that there were more .NET old hands, which seems not to be the case. The proportion of newcomers is also very large, probably because we are old. From the perspective of position level, junior, middle and senior developers account for 40%. Combined with years of working, it could be found that this 40% probably be the 40% 0-3 years of developers, of which junior developers only account for 13%, while middle and senior developers account for 25%, which shows, .NET developers are easier to enter into a middle and senior position.

To B is not the majority, but to C and to D account for a large proportion.

#### **The positive side:**

.NET programmers do not work much overtime and are in a happy state. The adoption rate of automation/containerization and the K8S is very high at about 80%, which is a reflection of overall advancement. MongoDB has a high proportion, which is a reflection of technical diversity. The proportion of female developers is significantly higher than the average of 20% in the same industry, which is also another reflection of diversity.

**Still need to work on:**

**Keywords: Upgrade to .NET Core and Framework**

The proportion of .NET Framework is still very large, and of that 23% of companies still using .NET Framework 4.x, around 60% have no clear upgrade plans. These are the companies that 12% of .NET developers work for.

In terms of framework, nearly 50% of the respondents are not very satisfied with the framework used by their company, and this aspect also needs to be strengthened.

In terms of business model, the product form of most companies is still the traditional model of private deployment and buyout. From the perspective of software products, SaaS and platform products also need more companies to adopt .NET.

## Joint Release



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## Special Thanks



Power Platform  
Chinese User Group

