

# The True Cost of Hiring In-House Developers

From training through benefits  
to paid leave, the cost of adding  
new members to your team  
is never just the salary.

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# Introduction

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More clients. More sales. More opportunities.

Growing your company is great, but it can pose hiring challenges, especially when you're looking to scale your development team up.

CTOs want the perfect candidate with superior technology skills... at a reasonable cost. Put in this difficult spot, hiring managers often face the "in-house development vs. outsourcing" dilemma:

**"Do I hire an in-house developer or outsource? Which is most cost-effective?"**

There are pros and cons to both solutions, and every project has its own individual criteria to consider. A full review of all those would give us enough material for another ebook. In this guide, we're going to focus on the most commonly used metric in deciding between developing your software in-house or outsourcing: cost.

**The single greatest mistake CTOs, managers, and startup founders make when hiring developers is ignoring the embedded costs.** There are numerous substantial costs involved in hiring and maintaining employees that a lot of people overlook.

We're going to show you how to account for those additional hiring costs. We've spent over 14 years building software development teams for clients from all over the world. We created this ebook to share the lessons we've learned with you.

**Read on, and you will find out:**

- 1) why calculating the true cost of hiring in-house developers is so important,**
- 2) how to break down the embedded hiring costs,**
- 3) what the cost comparison of hiring developers in major countries is.**



# Why Is Calculating The True Hiring Costs Important?

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## 1) Getting the most out of your budget

You operate on a budget. You want to squeeze as much value and return on investment out of it as possible. That much is obvious.

Miscalculating how much an in-house developer actually costs means missing out on more cost-effective avenues like outsourcing, hiring a freelancer, or using a local contractor.

The extra money you spend on hiring in-house can't be used to bring value in other ways.

## 2) Charging enough to meet your profitability goals

Once you learn the true cost of your employees, you'll know whether you charge enough for your products and services to meet your profitability goals. For example, if you charge your customers a rate below what an employee costs you, you lose money.

**Higher costs mean tighter budget constraints and lower profit margins.** We can likely all agree that you'd prefer lower costs, a more comfortable budget position, and higher profit margins. Who wouldn't?

Calculating the true hiring costs helps you make more informed decisions as you grow your development team, while also improving your company's ROI and, ultimately, the bottom line.



# Meet Mark—A Fintech Ceo With A Scaling Challenge

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Meet Mark.

Mark is the CTO of a growing fintech company. His team just received Series A funding and they're looking to scale their development team up for the London headquarters. He needs experienced Python developers and he needs them *fast*.

After doing some research, Mark considers hiring a software development company, but backs down after getting a quote of **£6,000 per developer per month**.

Mark believes he can instead hire a great developer locally. He learns that **the average salary for a UK-based Python developer is £81,300 a year—or £6,800 a month**.

Note that this is the salary for a Senior Python developer. That is the skill set Mark would get with outsourcing, and to fully meet his needs, a regular developer simply won't do.

Also note that the salary figures in this ebook are approximations, rounded up or down to multiples of 50, to make calculations easier and better illustrate our points.

*Average annual salary per developer per country in pounds sterling*

United States	United Kingdom	Australia	Netherlands	Switzerland	Norway	Sweden
£123,850	£81,300	£54,200	£53,800	£84,400	£70,850	£49,550

[Source](#)

In the end, Mark decides not to outsource. He would rather pay a little bit more and have complete control over his software development team in-house.

£800 in spending per developer per month won't make *that* big of a difference, right?

Well, it's not so simple. Mark just made a huge mistake in his calculations:

**He ignored the embedded costs.**

In actuality, costs per employee are often much greater than those charged by an outsourcing partner. In the next section, we're going to break down the embedded costs and show you exactly where Mark went wrong.

Poor Mark doesn't realize it yet, but there's a very good chance **he would have saved money by outsourcing**—quite a bit of money, too.



# Breaking Down The Embedded Costs

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An in-house developer (or any employee) is always more expensive than his salary when you factor in embedded costs.

When we say “embedded costs,” we mean the costs that are often ignored and aren’t reflected in the employee’s salary—things like:

- employee benefits,
- administration and infrastructure,
- paid leave,
- training,
- management,
- recruitment,
- vacancy,
- additional direct costs.

Let’s break down each of those categories.

## 1) Employee benefits

In most countries, companies are obligated to offer certain benefits to employees, such as social security, retirement contributions, or health and dental insurance.

A [US study](#) showed that employee benefits (including paid leave, sick leave, personal leave, and holidays) make up at least 30% of the true costs and well over 40% of the salary cost in the private sector.

Joe Hadzima, a senior lecturer at MIT’s Sloan School of Management agrees. [He writes](#) that the salary plus benefits amount for 1.25-1.4 times the base salary.

Employee benefits are by far the greatest embedded cost most companies face. They can easily add 15–20% to the base salary.

## 2) Administration and infrastructure

Administration and infrastructure are resources all employees benefit from but don't pay for—things like office space, internet connection, management systems, company cell phone, laptop, software, company events, or administration and maintenance services.

The company covers these expenses to provide a suitable working environment for all its employees. When we factor in your employee's share of the administrative and infrastructure costs, it can add as much as 15% to their true cost.

## 3) Paid leave

Most companies offer paid holidays, sick days, and personal days. In the UK, paid leave increases the true cost of an employee as follows:

- Holidays: 3.64%
- Sick days: 1%
- Personal days: 0.3%

Note that paid leave costs vary greatly from country to country. Consider an Australian company, which offers 4 weeks of paid annual leave minimum to every employee, versus a typical US company, where the norm is only 2 weeks. Paid leave costs can add at least 10% to the base salary.

*Paid vacation days and paid public holidays in main countries*

×	United States	United Kingdom	Australia	Netherlands	Switzerland	Norway	Sweden
Paid vacation days	0	28	20	20	20	25	25
Paid public holidays	0	8	10	8	7	10	9

Source



## 4) Training

Continuous training and professional development is essential to maintaining a top-notch software development team. Your developer may need to attend seminars, summits, workshops, or courses to grow and supplement their skills.

Most of the time, any new hire needs initial training to familiarize themselves with the company and its processes. Those training sessions are usually given by managers, which means their time is diverted from creating value to other purposes. Sometimes employers outsource training to consultants and training organizations.

Tuition reimbursement is also a popular avenue for training. Employees first pay for the training of their choosing, then the company pays him back. We practice this policy over at STX Next, to great success.

No matter how you decide to train your employees, it increases the cost of the employee to your company. Annual training costs equal about half a month's salary for the new hire. This may add a 5% extra cost to the base salary.

## 5) Management

If you hire an entire in-house software development team, you'll need a manager to oversee it. In the UK, you generally need one manager for every 10 employees.

A new manager increases costs by 150%. When we divide the cost between 10 employees, the extra cost for an individual developer is 15%.

Though ideally you have one manager per every 10 employees, in reality this varies. One manager might be overseeing anywhere from 10 to 30 employees.

This can mean 5–15% of extra cost.

## 6) Recruitment

Remember Mark, our fintech CEO from earlier? He's looking for Python developers with high-quality skills, and those are in demand. It's unlikely that his future developer is unemployed and looking for work. Mark might need to poach one from another company.

There are different methods for recruiting a new developer. All carry their own cost considerations:

## a) Headhunting

Headhunting involves bringing in an external recruiter who will charge 1–2 monthly salaries. You'll also need to take rotation into account. On average, a company needs to replace a developer every two years, incurring productivity losses of about 4%.

This assumes that it'll only take 1 month to replace the developer. In many cases, however, it takes longer than that.

For example, in small and growing teams (often without an internal HR team), the hiring burdens fall to an already overworked CTO, VP, or Director of Engineering.

$$1 \text{ month productivity loss} / 24 \text{ months} = 4\%$$

Productivity losses can be even higher. [22 case studies](#) concluded that the typical turnover cost for most positions in the US is 20%, according to the Center for American Progress.

## b) Employee referrals

Some companies encourage current employees to recommend potential hires. If the recommendation results in a successful hire, the company awards the referrer anywhere from £800–2,500 (one-time payment, depending on the type of position).

## 7) Vacancy

Unfortunately, recruitment isn't instantaneous and companies suffer productivity losses of various kinds while searching for new talent and training new hires:

- lost sales,
- delays and disruptions in new product introductions,
- lost knowledge and tech stack skills.

[A study from Oxford Economics](#) reports that it takes 28 weeks on average for a new employee to reach their optimal productivity level. It estimates that those productivity losses cost £25,181 per employee.

In our experience, approximately 5% of extra cost is added to the base salary for vacancy costs.

## **8) Additional direct costs**

### **a) Relocation costs**

Do you have to sponsor or compensate your new hire who's moving to a city with a high cost of living?

### **b) Advertising the position**

Do you have to spend time and/or money to advertise the position?

### **c) Temp staffing fees**

Do you need to temporarily staff your team? Recruitment agencies can easily cost \$150 per hour for temporary employees. Quality and reliability is also uncertain.

No matter which method you use, some recruitment costs will be incurred, including the cost of the recruiter and productivity losses while recruiting. In our experience, recruitment costs can add 5% to the base salary.



## Mark's True Cost In A Best-Case Scenario

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Mark, the fintech CEO, thinks it's cheaper to hire a local in-house Python developer than it is to outsource, but he failed to include the embedded costs that come with hiring a full-time, permanent employee.

Let's quickly review Mark's case and factor in the embedded costs we discussed in the previous section.

Note that this calculation features a best-case scenario. We'll assume the absolute minimum amount of additional costs, based on the experience we've acquired from delivering 350+ software projects over the years. Depending on the project context and country, the true cost could be much higher.

As a reminder, the average monthly salary for a Python developer in the UK is £6,800.

### Cost summary

- Employee benefits: 15-20%
- Administration and infrastructure: 15% (at least)
- Paid leave: 10% (at least)
- Training: 5% (at least)
- Management: 5-15%
- Recruitment: 5%
- Vacancy: 5%

### The best-case scenario

- Employee benefits (15%): +£1,050
- Administration and infrastructure (15%): +£1,050
- Paid leave (10%): +£700

- Training (5%): +£350
- Management (5%): +£350
- Recruitment (5%): +£350
- Vacancy (5%): +£350
- **Total extra cost: +£4,200 per month**

Mark was missing £4,200 per month of embedded costs. When he adjusts for those, his true cost of hiring an in-house Python developer skyrockets from £6,800 to a whopping £11,000 per month.

**This is the cost for just 1 developer.**

A typical Agile development team could include 5–6 developers, 2 Quality Assurance testers, 1 Product Owner, and 1 Scrum Master.

Let's take a look at Mark's "in-house development vs. outsourcing" dilemma with the adjusted true cost.

×	True cost: Best case	True cost: Average	True cost: Worst case	Outsourcing
Per developer Per month	£11,000	£11,525	£12,050	£6,000
Per developer Per year	£132,000	£138,300	£144,600	£72,000
Per team of 10 Per month	£110,000	£115,250	£120,500	£60,000
Per team of 10 Per year	£1,320,000	£1,383,000	£1,446,000	£720,000

Clearly, an in-house developer is far more expensive than their monthly salary. Once you account for the true cost, outsourcing emerges as the vastly more cost-effective solution.



## Embedded Costs For The Outsourcing Partner

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Like Mark, the outsourcing partner faces all the same embedded costs, though possibly in different amounts. The key difference is that the outsourcing company had already factored those costs into its price quote—Mark had not.

**You can be sure that the quote of £6,000 per developer per month reflects all the embedded costs discussed above incurred by the outsourcing company.**

Using salary as the only indicator of cost initially made it seem like Mark was going to save money by hiring an in-house Python developer. In reality, once he adjusts for the embedded costs, hiring an in-house developer is actually *more expensive*.

Although, to be fair, this isn't necessarily always the case. Every situation is different.

Companies differ in size, in reach, and—you guessed it—in costs. A startup likely has fewer infrastructure, administration, and management costs than a bigger, more established firm. If you calculate the true cost of a new hire for a startup, it might in fact be more cost-effective to hire an in-house developer.

Don't forget, outsourcing quotes also vary to a great degree, just as company salaries do.

Our point here is not to convince you that outsourcing will always be cheaper, but rather to encourage you to make better hiring and budgeting decisions by calculating the true cost of your developer.



## When Is It Better Not To Outsource?

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In certain situations, it's better not to work with an external software house, regardless of the cost comparison:

- 1) If you have no one on your team dedicated (or willing) to communicate and deal with the outsourcing partner on a regular basis, then manage your development team in-house.**

Successful outsourcing requires a high level of interaction on both sides of the partnership. Without it, the project is bound to disappoint, wasting your time and money.

- 2) If your project is relatively small, outsourcing it to a software house is probably not the right choice for you.**

For projects that require no more than a single developer for a few weeks or less, using a freelancer or local contractor is frequently the better option.

Cost is an important criterion, but it's never the whole story. Don't forget to factor aspects such as skill set, project size, and company commitment into your decision.



## True Cost Per Developer Per Month At A Glance

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X	United States	United Kingdom	Australia	Netherlands	Switzerland	Norway	Sweden
Base monthly salary	\$13,350	£6,800	A\$8,600	€5,250	9,100 fr	70,300 kr	51,050 kr
Employee benefits (15%)	\$1,950	£1,050	A\$1,350	€750	1,350 fr	10,500 kr	7,650 kr
Administration and infrastructure (15%)	\$1,950	£1,050	A\$1,350	€750	1,350 fr	10,500 kr	7,650 kr
Paid leave (10%)	\$1,300	£700	A\$900	€500	900 fr	7,000 kr	5,100 kr
Training (5%)	\$650	£350	A\$450	€250	450 fr	3,500 kr	2,550 kr
Management (5%)	\$650	£350	A\$450	€250	450 fr	3,500 kr	2,550 kr
Recruitment (5%)	\$650	£350	A\$450	€250	450 fr	3,500 kr	2,550 kr
Vacancy (5%)	\$650	£350	A\$450	€250	450 fr	3,500 kr	2,550 kr
True cost	\$21,150	£11,000	A\$14,000	€8,250	14,500 fr	112,300 kr	81,650 kr





## Final Thoughts

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Cost is a major factor when scaling your software development team up—but it's not the only one. Many CTOs, startup founders, and hiring managers make the same mistake our fintech CEO did: they use salary as the measuring stick.

They forget—or fail to realize—that the salary does not reflect the employee's true cost to the company. Once you account for embedded costs like employee benefits, paid leave, and recruitment, the comparison is quite different.

Mark thought he would save money by hiring an in-house developer, when that was actually the more expensive choice.

The moral of this story: the next time you compare hiring an in-house software developer with picking an outsourcing partner, remember to look at the “true cost” and not just the salary.

[We can help you with outsourcing](#) if that's what you need. Feel free to [reach out to us](#) with any questions you may have.

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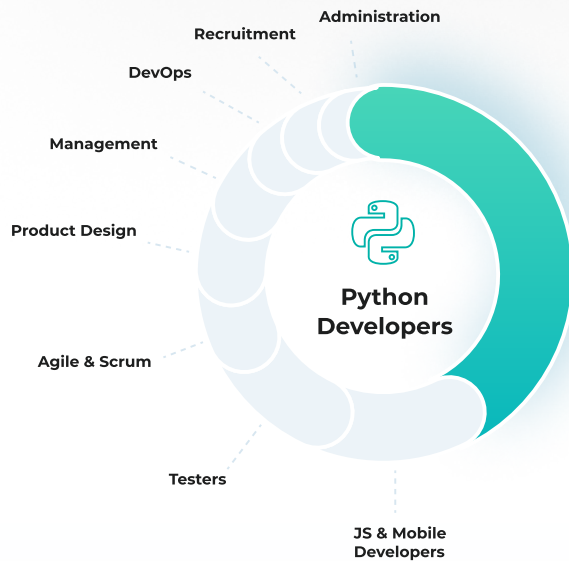
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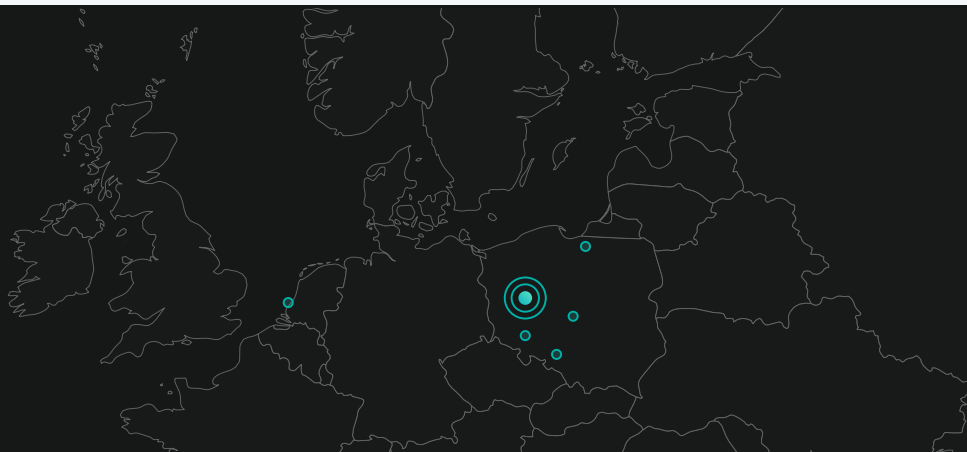
average experience of our developers

## Locations

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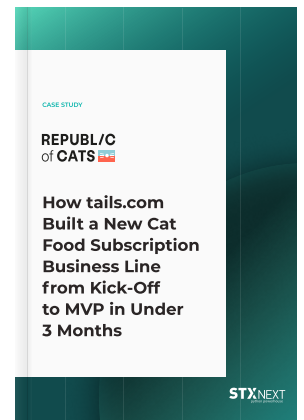
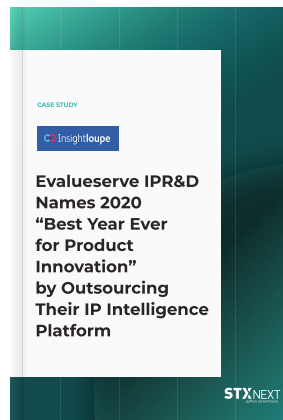
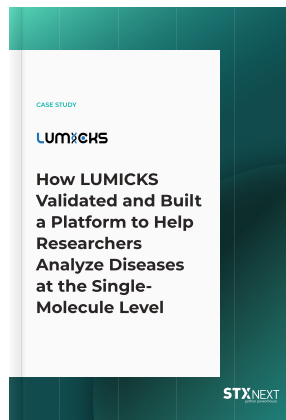
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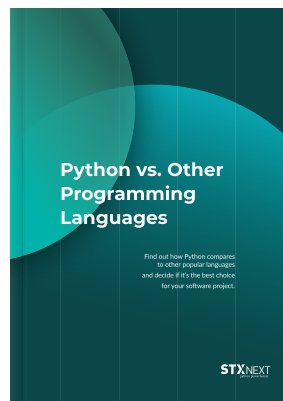
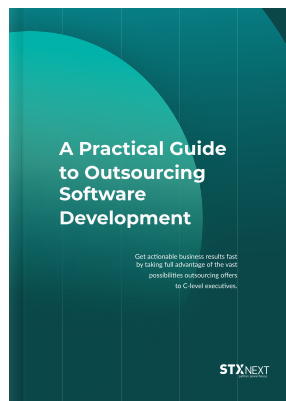
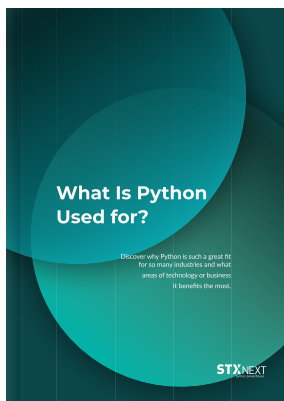
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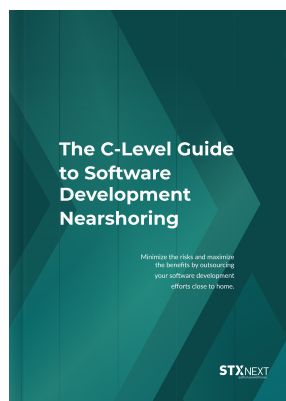
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