instantdeveloper

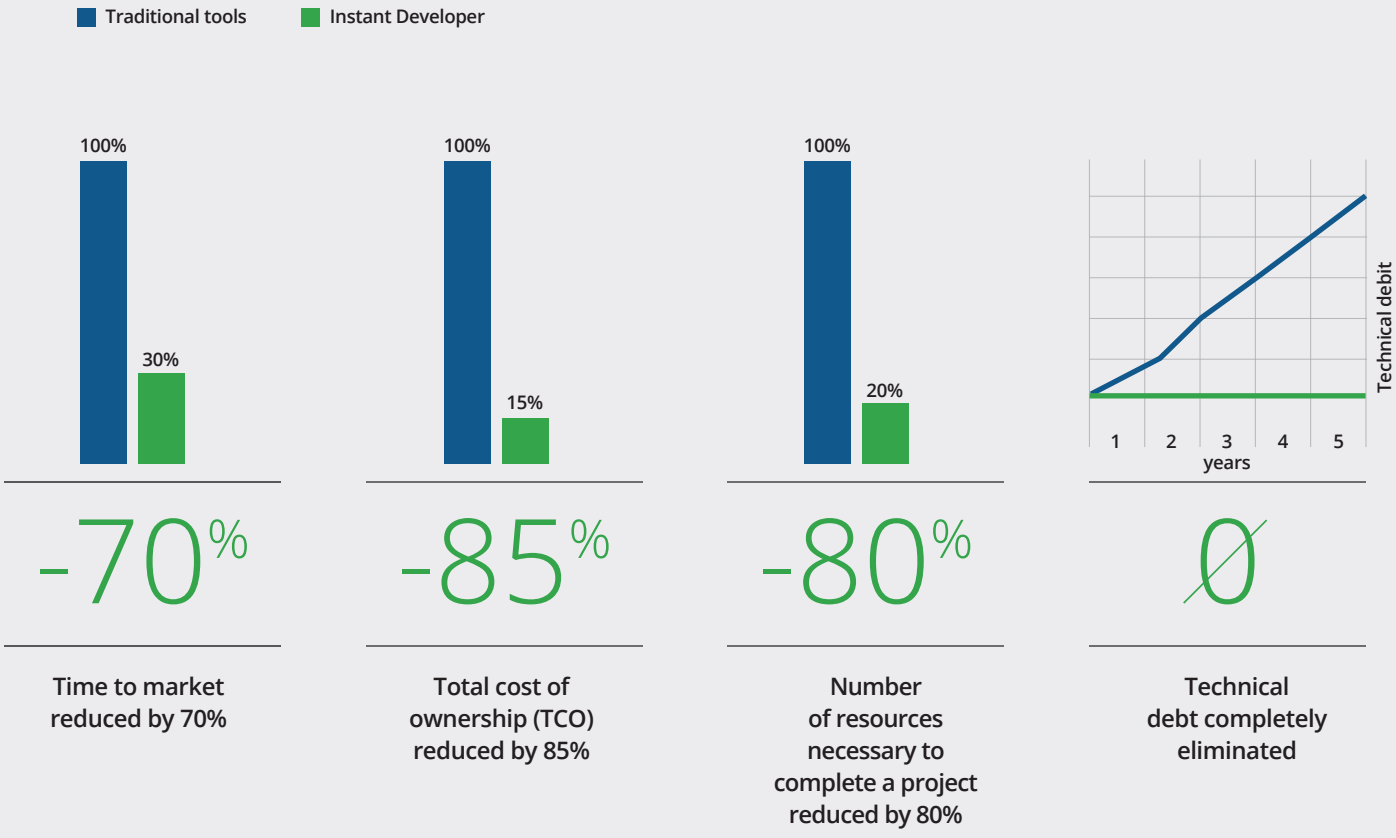
The app platform for professionals

Instant Developer increases productivity of development teams reducing TCO and creation times for software solutions

Instant Developer allows you to increase productivity by at least 15-fold compared with traditional development tools based on code written in text files.

But what does this mean as far as the economics of managing a development project?

What are the benefits for the team in terms of times and costs?
The evidence, i.e., actual use in production for over 15 years, shows that software houses, corporate IT teams, and developers who use Instant Developer benefit from the advantages listed below. This data is consistent with the dozens of descriptions of projects and solutions accessible from the **Customers page of the Instant Developer website.** The data refers to typical web and mobile applications and to comparison with the use of traditional development tools, where the code is written and managed in text files:



-70%

Time to market reduced by 70%

-85%

Total cost of ownership (TCO) reduced by 85%

-80%

Number of resources necessary to complete a project reduced by 80%

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Technical debt completely eliminated

Note that the original data on increased productivity was obtained with an objective method described in the following pages, to which the reader can refer to verify all the details of this study.

Study on increased performance derived from using Instant Developer

To objectively calculate the cost factors of creating complex information systems, it was necessary to make some assumptions. First, the *development time* factor is influenced by other non-measurable data: degree of familiarity with the problem by programmers, years of experience, familiarity with the technologies in question, etc.

Therefore, the unit of measure we used for software cost was the **total number of lines of code calculated at the end of the project,** where "end" refers to the entire life cycle of development plus at least one year of maintenance. This approach allows taking into account the implementation of refactoring cycles that occur during use of the software.

This number is then compared with the corresponding number of *code objects* written in the Instant Developer environment. Even though it uses relational programming rather than a text-based language, Instant Developer allows you to specify the same algorithmic processes as the most widely-used languages in the market.

Ten software projects of different sizes and longevity were examined, as shown in the following table.

Project	Type	InDe LOC	Src LOC	Total LOC	Classes	Longevity (y)
WEBTOP	SMALL	256	1050	46025	27	1
CHECKERS	SMALL	1029	1646	48196	5	5
MWIND	SMALL	331	1498	84063	20	2
ORGANIZATIONS	MEDIUM	1542	5148	106036	30	2
OMNISERVICE	MEDIUM	6592	9678	181243	93	5
AL REPORTING	BIG	4727	10839	217522	104	12
IDES	BIG	13852	31008	250257	171	8
PRIME RADIANT	BIG	12827	30013	275302	159	2
CIMA NET	BIG	7785	17198	283070	146	7
CRM	BIG	9771	23800	435444	206	9

The *InDe LOC* (Lines of Code) column contains the number of code objects that were written with Instant Developer for each project. Note that **none of these projects required the use of external development systems,** a distinctive feature of Instant Developer.

The *Src LOC* column contains the number of lines of code corresponding to the *InDe LOC* generated in the underlying language (C#, Java, or JavaScript). The *Total LOC* column contains the total number of lines of code for the application, but excluding all the server side, client, and mobile frameworks.

The Classes column shows how many classes (entities, classes, and forms) the project contains. Finally, *the Longevity* column contains the number of years the application has been kept in use.

What does the difference between *Total LOC* and *Src LOC* correspond to?
There are four types of source code in addition to the actual application code:

1) Non-procedural query code
2) Code for links between objects
3) Initialization code of forms and classes
4) Infrastructure code

It is clear that the effort required to generate 1000 lines of code to initialize the objects of a form is not the same as that required to write 1000 lines of application code. For this reason, the *Total LOC* should not be taken as a point of comparison as is, but weighted according to the following parameters:

1) 10% of the Total LOC is completely excluded, as it corresponds to Src Loc.
2) The code of non-procedural queries is estimated as 10% of Total LOC and is taken into account 100%, as the difficulty in writing a query is equal to other types of application code.
3) The code for linking between objects is estimated as 10% of Total LOC and is taken into account 100%, as it would have to be written with any development system other than Instant Developer.
4) The code for initializing forms is estimated as 30% of Total LOC and taken into account only 10%, as the other developments environments can also generate this code automatically.
5) The code for initializing entities is estimated as 30% of Total LOC and taken into account only 10%, as the other developments environments can also generate this code automatically.
6) Infrastructure code is estimated as 20% of Total LOC and taken into account only 20%, based on the possibility for re-use in infrastructures other than InDe.

Finally, *EQ LOC* is calculated as the sum of *Src LOC* and 27% of *Total LOC*. *EQ LOC* is therefore the **minimum number of lines of code that would be necessary to write with any language, framework, or architecture-framework** other than Instant Developer to obtain the same result.

Project	InDe LOC	Src LOC	Total LOC	EQ LOC	xGAIN
WEBTOP	256	1050	46025	13477	53
CHECKERS	1029	1646	48196	14659	14
MWIND	331	1498	84063	24195	73
ORGANIZATIONS	1542	5148	106036	33778	22
OMNISERVICE	6592	9678	181243	58614	9
AL REPORTING	4727	10839	217522	69570	15
IDES	13852	31008	250257	98577	7
PRIME RADIANT	12827	30013	275302	104345	8
CIMA NET	7785	17198	283070	93627	12
CRM	9771	23800	435444	141370	14

Next the *xGAIN* can be calculated, which represents **the minimum performance increase** from using Instant Developer. Using the weighted average with respect to the size of the project, the value **14.86** is obtained, rounded to **15** in the brief summary introducing the InDe platform.
The previous calculation does not take into account the application frameworks of Instant Developer. This is because alternative frameworks, even though not equivalent, are available on the market and can be obtained otherwise. The sizes of these frameworks are listed as a reference.

InDe 13.0	Total LOC
Framework Server	152258
Framework Client	88562
Framework Mobile	183448

The first three projects of the ten listed in the table are sample applications. The others are commercial business applications. If you want to verify the data for these projects, please contact Pro Gamma.

About Pro Gamma Instant Developer

Pro Gamma was founded in Italy in 1999 and has its offices in northern Italy. Since the beginning, the company's goal has been to help developers and companies rapidly create latest-generation software solutions without needing to stay constantly up-to-date on all the underlying technologies.

Instant Developer is the platform used by hundreds of software companies and corporate IT teams of every size to develop enterprise-level mobile and web applications. Any developer, at any experience level, can increase the speed of development, successfully creating flexible and secure solutions that are integrated with existing systems, while keeping in step with the evolution of technology.

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