IT Craft

HOW SOFTWARE DEVELOPMENT TEAMS WORK: A SHORT GUIDE

The next success will be yours!

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1 Preliminary project estimates

You have an idea—a great idea. But how much will it cost?
You contact us to find out.
Your message arrives at the business development department.

Business development managers serve as connection points between teams and clients.
They handle all messages and forward them to the right person.
They ensure:

- **timely handling of requests**
- **requests go to the right manager based on project type, urgency, and clients' preferences**
- **client and team are on the same page regarding their respective project**

In some cases, clients ask us to sign an NDA to ensure their project requirements are kept confidential. IT Craft always honors their request.
Business development managers review and discuss the client's NDA.
It is signed by the CEO and sent back.
Requests are forwarded either to business analysts or directly to project managers.

Business analysts – handle incomplete requirements and clarify them.
Business analysts process requests to:

- **specify details of requirements**
- **compile a specification**
- **consult with tech experts on scope and timeline for requested functionality**
- **prepare wireframes**

Project managers – work with complete requirements and map out the best implementation path.
Project managers focus on a specific project's roadmap and starts an in-depth technical talk with their client regarding:

- **possible implementation paths, as per requirements**
- **scope and timeline**
- **technologies**
- **team squad**

2 Cooperation models

Depending on nature and goals of the project, the project manager offers one of three possible models:

FIXED PRICE MODEL

This model type is rigid. Client pays for a preliminary, agreed-upon scope of work. No unexpected changes are possible.

TIME AND MATERIAL

This model type is flexible. Client pays for number of hours the team spends actively working on client's project + materials. The team is flexible in accepting clients' change requests.

DEDICATED TEAM / TEAM EXTENSION

Upon agreement, IT Craft's development team acts as client's dedicated development team and either assumes responsibility of the entire project (dedicated team) or works on a single activity (extended team) within a large software development project.

	FIXED PRICE	TIME AND MATERIAL	DEDICATED TEAM / TEAM EXTENSION
Best with:	Projects with clearly defined requirements	Projects with changing requirements	Outsourcing either entire project or a single activity on a large project
Downsides:	Changes are possible only with an extra, written agreement	Costs tend to be higher than original estimate	Requires established communication on client's side

At the end of the project-estimate stage, IT Craft provides its client with a rough estimate on costs and timeline. The company offers a preliminary project plan and the best-suited cooperation model.
When the estimate is ready, the company discusses project details and terms of agreement with the client. The parties work through the overall details together: scope, timeline, team squad, the costs range, and payment plan.
When they agree on the details, IT Craft prepares a contract which must be signed by both parties.

3 Project development steps

Custom software development includes the following steps.

DISCOVERY & PLANNING | UX / UI DESIGN | CODE DEVELOPMENT | TESTING | LAUNCH | POST-GUARANTEE PERIOD

Usually, development of any software product is divided into **Sprints**.
A Sprint lasts two weeks.
Each Sprint starts with Sprint planning and ends with deliverables, reports, and team retrospective.

4 Project development steps

Project discovery and planning

The entire development team is involved in the project.
During the discovery and planning step, the development team assigned to the project dives deeply into the project and prepares a detailed project plan. This step diminishes, even excludes costly errors in app architecture, determines exact project goals, and requirements, and estimates scope more precisely.

- **Business analyst** – prepares/specifies requirements, collects estimates from other team members, and writes Software Requirement Specification (SRS); helps making wireframes.
- **Project manager** – validates estimates and prepares a project roadmap based on scope and timeline.

- **UI/UX designer** – helps draw up wireframes; prepares designs of app screens.
- **Software developers** – provide estimates of their anticipated work on the app.
- **QA engineers** – works on validation and verification of requirements.

After completion of discovery and planning, the product owner gets:

- **Software specification with wireframes**
- **Project roadmap**
- **Estimates on time and scope of work**

UX/UI Design

During this project planning and discovery, the designer prepares designs for wireframes based on project documentation. Usually, the designer prepares one to three sets and the product owner chooses one.
The designer creates main screens, chooses fonts, and color schemes.

When the app is complex, a UX designer takes an active role in the project. The UX designer focuses on usability of a system, i.e., how easily users can navigate through the app or website.
A project needs a dedicated UX designer when it becomes complex, has too many screens, and a risk arises that with too many screens, the system becomes a maze in which users might get lost.

After completion of UX/UI design, product owner gets:

- **Visual concept of the software solution**
- **Color scheme**
- **Visuals for main screens**

Software development and testing

Software development and testing includes Sprints.
The number of Sprints is based on project scope.
A development Sprint lasts two weeks.
On Day 1 of each Sprint, the team discusses the Sprint plan in detail.
All team members begin working on their respective sections:

- **Project manager** – monitors project progress; discusses project progress with both team and client.
- **Business analysts** – updates project documentation; ensures both team and client have the same understanding of requirements.
- **UI/UX designer** – provides designs (if needed).
- **Software developers** – produce source code; develop unit tests.
- **QA engineers** – write test plans, check already-developed source code.

Teams hold short, stand-up meetings every day to synchronize their efforts on the project. This way, every team member remains in sync with the project even when focusing on a particular, narrow task. They know what the others are doing. Project goals remain visible for everyone.

After completion of each software development and testing Sprint, the product owner gets a "visible" update:

Access to a part of functionality for testing (demo)

Detailed report on the hours spent

Plan for the next iteration

When all the Sprints have been completed, the product owner gets a Product Demo.

Software release

After the main codebase is ready, QA engineers start comprehensive testing on a QA testing server. The comprehensive tests include: user acceptance, regression, and performance. QA engineers ensure the software works equally well on chosen platforms and functionality works as envisaged.
QA engineers make a list of defects that developers must fix immediately.
The software is then deployed on a production server where it is tested again.
If something does not run as planned, developers make a hot fix or quick update, do an analysis, fix the bug, and restart the process.
The work is done once the product owner approves the program.

Upon completion of software release, product owner gets:

- **Ready-for-use software either deployed on product environment system or published in the app store**
- **Project documentation and source code**
- **Recommendations on software maintenance**

Post- launch guarantee period

After the software has been launched, the guarantee period starts and lasts for one month. All work needed for software stabilization (fixing bugs and flaws, etc.) is done at no additional cost to the client during the guarantee period.
The same development team works with the client during the post-launch period. The team has the project knowledge and can quickly handle any issues that might arise. Not only is it good business practice, but it also saves the client's time. This is crucial for such a dynamic industry as software development.

5 What are six important characteristics for a software development provider?

When looking for a software development provider, consider the following points:

IMMEDIATE START
Development starts immediately once there is a signed agreement on scope, timeline, and budget. This avoids delays and keeps pace to reach the desired deadline.

TRANSPARENT DELIVERY
You can also check the status on a project. You receive Sprint plans and reports. You always know what your team is working on.

ESTABLISHED WORKFLOW
Senior-level engineers have worked for a long time at the company.
Team squads are stable and so are development processes.
You do not waste your valuable time micromanaging.

KNOWLEDGE TRANSFER
Teams actively use repositories and knowledge transfer. Usually, several people have project knowledge. They can substitute for one another, if needed.

PROJECT CONSULTING
Development team implements technical solutions and helps find optimal technical solutions for each project. They use cutting-edge technologies and approaches to ensure a longer software life-cycle.

PROJECT MAINTAINABILITY
Every project is developed with future necessary maintenance in mind. This helps our clients save money on further project improvement and maintenance.

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WE'D LOVE TO HEAR FROM YOU!