STACK SPORTS –

National Data Center

ABOUT STACK SPORTS

Stack Sports is a leading sports technology firm that offers tech solutions to various sports, including soccer, basketball, baseball, football, and more. It has revolutionized sports management by offering robust software solutions to sports organizations, clubs, leagues, and associations. Their technology streamlines operations and manages everything from registrations to schedules and communications.

The biggest soccer organization in the US needed a centralized system to manage all US soccer players' information. This case study will explore how ThinkSys, their sole vendor, helped them overcome such problems.

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THE NATIONAL DATA CENTER (NDC) APPLICATION

This application is an integral part of the soccer ecosystem in the United States. It serves as the pivotal hub for obtaining FIFA IDs, an essential requirement for anyone looking to participate in the sport at a professional level.

Here's how it works: Soccer players, through their respective clubs, apply for a FIFA ID by providing their personal information. The clubs then forward these applications to the country's largest soccer organization, which in turn liaises with FIFA to secure the IDs via the NDC application. A unique ID is then generated for each player.

Stack Sports approached ThinkSys to take over NDC and start building, managing and maintaining this critical software for US's largest Soccer organization.

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CHALLENGES

When ThinkSys took over the project, there was a long list of obstacles:

1. **No In-House Team:** Stack Sports had just lost its software development team. In short, there was no software developer available to assist our team with the required knowledge transfer and process updation.

2. **No Process Documentation:** Since there was no internal team support, ThinkSys had to fill the void, taking over software development, maintenance, QA, and DevOps of the NDC. Not only that, we had to quickly adapt to the systems and processes to understand the soccer organization's requirements and deliver, that too within 6 weeks.

3. **Complex Software:** We had to understand the complexities of the data center environment to update the software and improve its functionality regularly. Since Stack Sports didn't have the proper processes at that time, we had to build a new one.

4. **Poor FIFA ID & Registration Management**: We had to ensure each player gets accurate IDs on time. For this, we needed to tweak the existing tech stack while maintaining data integrity and compliance with FIFA regulations.

5. **Manual Processes:** From build to deployment, every action involves manual processes. As a result, the whole software development lifecycle became time-consuming. We had a challenge to replace all the manual tasks with automation.

6. **Ineffective Agile Implementation:** A lack of proper planning and goal-setting processes led to unaccountability and consistent delays.

7. **No Alerting & Monitoring:** Issues often went unnoticed for two days or more. The lack of an internal team and robust alerting & monitoring system made it even worse, and such issues were piling up rapidly.

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SOLUTIONS

We didn't have much time to brainstorm and roll out new strategies, so we started making small changes from day one. Here is the breakdown of the approach that we followed to help Stack Sports overhaul its application:

Step 1 - Understanding the Tech: Our engineers familiarized themselves with the existing tech stack - **React frontend, Laravel PHP backend, and a MongoDB database.** They improved the database performance, optimized **AWS Elastic Search** for speedy result retrieval, and identified and resolved performance issues with the outdated MongoDB connector.

Step 2 - Changing Processes: Earlier, no effective processes were available. Hence, we made some changes, like:

- Replacing faulty test environments for thorough testing and validation to cease any post-production bug fixes.
- Scheduled daily team Scrum to discuss daily work status and bottlenecks.
- Created Sprints and set the goal as per the team's velocity.
- Scheduled sprint releases in certain intervals to achieve 100% sprint goals.
- Root Cause Analysis (RCA) meeting and docs creation for each production issue to promote learning from mistakes.
- Automated application deployment via CI/CD pipeline to eliminate manual intervention.
- Implemented an effective Git Flow version control system for development deployment.
- Reducing downtime to 0% even during application updates to provide users with a seamless experience.

Step 3 - Adding Robustness to FIFA ID & Registration Management: This was the most crucial part of the process that we had to make our priority. To improve this, we:
- Implemented a retrieval mechanism so each soccer player gets an accurate FIFA ID every time.
- Introduced end-to-end record validation mechanism to correct all the previous corrupted records.
- Integrated an intermediate system to prevent future records from being corrupted.

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OUTCOME

While facing these challenges head-on, ThinkSys was able to deliver meaningful improvements.

The benefits were undeniable:

1. **Efficient Software Changes:** We reduced the risk of errors and downtime, ensuring a smoother transition during updates.
2. **Complete Automation:** It led to quicker processing times, less administrative work, and improved accuracy in every action related to the SDLC.
3. **Enhanced Data Security:** The test environments, and data governance frameworks helped strengthen data security and minimize the risk of data breaches and unauthorized access.
4. **Proper Alerting & Logging Systems:** Issue tracking got quicker because of implementing alerting and logging systems, which enabled engineers to receive quick alerts on Slack and respond timely.
5. **Streamlined FIFA ID & Registration Management:** After introducing some new systems, the processing of FIFA ID generation got quicker, and soccer players got their accurate IDs on the first attempt.

Despite all the challenges, we were able to deliver on each front that the largest soccer organization was expecting from Stack Sports within 3-4 weeks. Through ThinkSys' efforts, they overcame these challenges, leading to increased efficiency, improved data accuracy, and enhanced security. This, in turn, allowed the NDC to serve the soccer community in the U.S. better.

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CONCLUSION

The project is a testament to Stack Sports and ThinkSys' remarkable achievements. ThinkSys delivered all required features on time, leading Stack Sports to extend their contract for additional projects. By successfully resolving the FIFA ID registration issue, they solidified their standing as a trusted partner in the sports technology field.

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LET'S WORK TOGETHER

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