**PROJECT NAME: NEMO**

**GROUP MEMBERS: DİLAY GÜLERSÖNMEZ,YALÇIN ÇELİKEL,EMRE AYBERK KOÇASLAN,KAAN MURAT TAŞDEMİR,AYŞE SERRA ER,HAMİ DENİZ KAYNAK**

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| # | NECESSARY NEEDS FROM THE ORGANIZATIONAL PROCESS |
|  | Regular meetings will be held to meet the needs of the organization and processes will be discussed comprehensively in these meetings. |
|  | a backup plan should be made for minimum damage in case of unexpected circumstances |
|  | Providing access to the database quickly and economically is necessary |
|  | A plan will be made for the steps to be carried out each week |
|  | Every person in the group is required to offer their opinion |
|  | trainings for the employees should be done with experts in the field |
|  | Contact will be made with people who have information about the project. |
|  | Generating new ideas and making plans with experts to put everything back on track in unexpected situations |
|  | In case of any unforeseen circumstances, ideas will be generated and plans will be made to address the situation. If necessary, assistance will be sought again from knowledgeable individuals. |
|  | more research will be made relating to fish and shellfish |
| # | **UNNECESSARY NEEDS FROM THE ORGANIZATIONAL PROCESS** |
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| SOFTWARE PROCESS NAME:SCRUM |
| SOFTWARE PROCESS DESCRIPTION: |
| Scrum, a dynamic framework in software development and engineering, prioritizes collaboration and addressing complex challenges. Originating in 1995, it emphasizes iterative progress, customer satisfaction, adaptability, inspection, and transparency. Central to Scrum is the Scrum Team, comprising a Product Owner, Scrum Master, and Developers, with defined roles. The framework encompasses five key events and three essential artifacts. Trust and adherence to Scrum Values, including Courage, Focus, Commitment, Respect, and Openness, are fundamental. Operating in short cycles called Sprints, Scrum fosters adaptability through regular feedback loops, enabling teams to inspect their work and processes transparently. Embracing a Professional Scrum mindset, characterized by mindset shifts, values, and collaborative work practices, is essential for success. |
| SOFTWARE PROCESS MODEL: |
| 1. Sprint: Setting the Foundation  Sprint Goal: Define project scope, establish communication channels, and conduct initial research and planning.  Sprint Backlog:  Conduct a meeting with stakeholders to clarify project goals and priorities.  Research current practices and challenges in fish pool operations in Turkey, and establish a location.  Define roles and responsibilities within the team.  2. Sprint: Water Quality Management  Sprint Goal: Implement the monitoring systems for water quality parameters.  Sprint Backlog:  Develop sensors for monitoring pH, temperature, and oxygen levels within the fish pool.  Integrate the sensors with analysis software.  Conduct the first test of monitoring systems.  Get feedback from the stakeholders.  3. Sprint: Feeding Efficiency  Sprint Goal: Integrate feeding systems with monitoring platforms to optimize feed management.  Sprint Backlog:  Develop algorithms for optimizing feed quantities and timings.  integrate automated feeding systems with the monitoring software.  Conduct tests to assess feed ratios and fish growth rates.  Fine-tune feeding algorithms based on performance & feedback from the stakeholders.  4. Sprint: Disease Prevention  Sprint Goal: Implement surveillance systems for disease detection and prevention.  Sprint Backlog:  Develop algorithms for the detection of common fish diseases based on sensor data.  Integrate disease detection mechanisms with monitoring platforms.  Conduct tests to validate the effectiveness of disease prevention measures.  Get feedback from the stakeholders, and make tunes if necessary.  5. Sprint: Remote Farm Management  Sprint Goal: Develop a centralized dashboard for control.  Sprint Backlog:  Design a user interface for the dashboard.  Implement features for remote monitoring and control of farm operations.  Integrate data analytics tools for performance monitoring.  Conduct user acceptance testing and gather feedback for improvements.  6. Sprint: Optimization  Sprint Goal: Conduct performance evaluations and code cleanup for optimization.  Sprint Backlog:  Evaluate performance metrics such as fish growth rates, feed conversion ratios, and water quality.  Identify opportunities for optimization and efficiency improvements.  Address any remaining issues or bugs, and polish the overall code.  7. Sprint: Testing and Deployment  Sprint Goal: Select a site for implementing the automated systems and conduct extensive testing.  Sprint Backlog:  Install and configure all hardware and software components at the test site.  Conduct the testing and gather feedback.  Make adjustments based on the test.  Prepare for full-scale deployment based on the success of the test.  8. Sprint: Evaluation and Scaling  Sprint Goal: Monitor performance and gather feedback from the test site operations to guide future decisions.  Sprint Backlog:  Monitor performance metrics and gather feedback from farm personnel.  Assess the value of productivity and resource efficiency.  Talk with the stakeholders one last time and prepare a final report. |
| REASONS TO CHOOSE THIS MODEL: |
| The reason for using Scrum in a fish farming project lies in its ability to effectively manage the dynamic nature of such projects. Here's why:   1. Adaptability: Fish farming projects can face various unforeseen challenges such as changing environmental conditions, disease outbreaks, or market demands. Scrum's iterative approach allows teams to adapt quickly to these changes by regularly reassessing priorities and adjusting the project plan accordingly. 2. Customer Feedback: Scrum emphasizes continuous feedback loops, enabling fish farmers to gather input from customers (such as distributors or end consumers) and incorporate it into the product development process. This ensures that the final product meets the needs and preferences of the target market. 3. Problem-solving: By breaking tasks into small, manageable increments, Scrum facilitates rapid problem-solving. In a fish farming context, where issues like water quality management or disease control may arise, this approach enables teams to address problems promptly and prevent them from escalating. 4. Team Collaboration: Scrum fosters collaboration and communication among team members, which is crucial in a complex industry like fish farming where various specialists (e.g., biologists, engineers, marketers) may need to work together closely. 5. Risk Mitigation: Fish farming projects often involve significant investment and inherent risks. Scrum's iterative delivery model allows for early detection of potential issues, reducing the risk of costly mistakes or project failure.   Overall, the agile principles embedded in Scrum make it well-suited for the uncertain and evolving nature of fish farming projects, enabling teams to deliver high-quality products that align with customer needs while effectively managing risks and challenges along the way.  Overall, Scrum offers a more flexible, customer-focused, and collaborative approach to project management compared to the Waterfall model. In dynamic and uncertain environments like fish farming, where adaptability and customer satisfaction are paramount, Scrum may be considered a better fit for achieving project success.  Formun Üstü  Formun Üstü  Formun Üstü |