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ValuJet Response

The article details the tragic crash of ValuJet Flight 592 from an atypical point of view. Rather than the typical analysis of a crash in which investigators seek out a single point of failure, the article instead explores the various outside, sometimes non-mechanical, causes that led to the crash. While it is true that a piece of equipment "caused" the crash, the reason for the equipment being there in the first place and the lack of caution in the proper procedure that should go into pre-flight preparations is what truly led to the ValuJet crash. The author makes a point of the fact that the so called "cheap airlines" are notorious for cutting corners. At every possible step, those in charge of decision-making at these airlines are never taking safety into account. This can be seen when there is background chatter making it difficult for the pilot and air-traffic controller to understand one another or when leftover materials are haphazardly added to the cargo of a random plane (in this case ValuJet 592). The financial bottom-line is the most important thing to them and as long as they believe their system can perform its function at the bare-minimum level, they are satisfied. The people in charge and the public at large, to be fair, have been lulled into a sense of security with all of the technical terms and reassurances provided by the designers of such systems. The article highlights the importance of following the procedures laid out by those who were tasked with the planning of the operation and systems as a whole. When the people performing individual tasks as part of a larger project take it upon themselves to alter the original plan they risk affecting other parts of the system that they may not, at that particular moment, have the foresight to know its potential impact upon the reset of the system.

The first part of the article focuses on the importance of following proper procedure regardless of the circumstances. People, being generally lazy by nature, tend to want to find shortcuts in the things they do. This is especially true in the

business world due to the fact that cutting corners is typically adjacent to cutting costs and therefore increasing profit, which is the end goal of any business. When applying this concept to software engineering, we can see similar occurrences when a team has a fast-approaching deadline. If a team has been working on a particular part of software during a sprint and realizes a few days from the deadline that they may not finish in time, they may think it best to cut some corners. Some features may be omitted or hastily thrown together in a way that may work in some use cases but not all of the cases that the consumer may desire. By sacrificing quality for time, the team of developers has inadvertently introduced issues into the system that may not become apparent until much later. Problems could arise later on when the underdeveloped part of the system is meant to interact with another part of the system and cannot do so properly due to the poor implementation of the rushed portion. It is also possible some key feature may have been overlooked and therefore when it comes time for evaluation with the customer they will notice something promised in the project proposal is missing and the development team will not be paid in full due to lack of proper results.

Another important takeaway from the ValuJet disaster, from a software development point-of-view, is the importance of the work of the individual. As it is stated in the article, “Safety is ultimately in the hands of the operators, the mechanics, and pilots and their managers, because it involves a blizzard of small judgements” (Langewiesche 11). For all of the planning that may go into any project, whether it be the proper production and maintenance of an airplane or the development of software, it is important that each individual performs his/her duties with the utmost care and to the best of his/her abilities. People on a team cannot always rely on one another or the project manager to double check every single piece of work that they perform. An individual must understand what is required of him/her based on the team’s agreed upon schedule and complete what is necessary fully and in a timely manner. This is not to say that one should never ask for help, people work in teams for a reason after all. If one requires help, he/she should get that help promptly so that he/she can resolve the issue that came up and still finish the work on time.

The importance of the individual is codependent on the importance of a strong sense of understanding and trust between team members and a sort of “team leader”. In the ValuJet example, the leader could be seen as David Hinson, the FAA’s administrator. Up until the tragedy, his main concern was keeping business moving and not necessarily the following of proper procedure in day-to-day activities. While the analogy between himself as the “lead” of ValuJet and the lead of a software development project is not perfect because of the difference in scales, the underlying principle remains. The presence of a team manager, of some sort, is important so that those responsibilities can be expected of at least one individual. This circles back to the issue of certain parts of a system relying on others. The members of a team rely on the one they have designated as a lead to understand the progress and direction the project is in at any given moment. Should any issues arise, the members of the team know they can look to the lead for guidance on how to approach the issue. The lead does not need to have a solution for any problem at any given time, but have an idea on who may be best suited to address an issue and what time and resources may be assigned to resolve the issue while still keeping the team and project on track without creating any additional problems in functionality or scheduling.

Examining the crash of ValuJet 592 provides interesting insights into the different possible contributing factors in the failure of a project or system. While the crashing of an airplane may seem like it should be the result of a mechanical failure, after evaluating the circumstances surrounding ValuJet 592 it is obvious there is more than just the tech to consider. Software is just as much as product of human work and collaboration as an airplane, the end result is just not physical. The same concepts apply to the process of building both, however, and it is important to keep those in mind. Proper communication, delegation of work, and attention to detail is essential to any team project to ensure that the job is completed properly and efficiently.