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Description automatically generated***Ara Department of Computing***

Assignment Cover Sheet

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I \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (student/s signature/s) hereby declare that this assignment is all my/our own work, and any sources are referenced and cited.

4 September 2023

Ben Orpwood

Ara Institute of Canterbury Ltd

IT Project Failures

Classic Mistakes and Mitigation

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# Introduction

I.T. projects fail all the time, depending on the source up to 85% of I.T. projects fail. In this research report I will investigate 10 failed I.T. projects and find out what went wrong by summarising each project, categorising the classic mistakes, comparing those mistakes to the best practices, and finally if the problem was with development methodology, I will identify a more suitable methodology that would have prevented this failure.

# Failed IT projects

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name of failed IT Project | Financial Costs | Causes of the project failure | Consequences of the project failure | List sources of your information |
| Healthcare.gov | $1.7B USD | Underestimating the size of the project,  Poor project management,  Wrong development methodology. | Users experiencing crashes, delays, errors, and the website being taken down after only a week being up | (Tabbaa, 2018), (henricodolfing, 2023), (ABC123, 2016) |
| The Phoenix pay system | $2.6B USD | The project was poorly managed,  The size of the project was underestimated. | One third of users receiving incorrect pay checks | (University of Regina, NA) |
| Rhode Island Unified Health Infrastructure Project | $407M USD | Underestimating the size of the project,  Was launch despite many problems without backup | underpayments, overpayments,  long lines at field offices, application-processing backlogs for food stamps | (Liberman, 2017) |
| US Depart of Defence Electronic Health Records System | On going | No clear plan developed,  Underestimating the projects size,  Not enough features to work. | Completely unusable system for all | (CHARETTE, 2023) |
| Electronic Lidl merchandise management and information system | 500M EURO | The company refused to adapt,  Lidl was trying to customise a system to do a different job than it was made for | 500M euro and 7 years of waited time | (henricodolfing, 2020) |
| The Coast Guard's Electronic Health Records system | $60M USD | Lack of testing,  Limited system functionality,  The system was converted, and the old system was completely discarded | Disrupted healthcare for 50,000 active troops and civilian,  Doctors had to go back to using paper | (HIT Infrastructure, NA) (TAHIR, 2017) |
| National Grid USA’s Systems Applications and Products in Data Processing | $585 USD | Poor testing procedure,  Not enough people were trained on using the system,  The system was too complicated and didn’t give the right information when queried | Miscalculated pay checks,  Lawsuits. | (henricodolfing, NA) |
| Minnesota's Vehicle License System | $100M USD | Lack of funding,  Poor leadership,  Non industry standard coding and testing procedures. | MNLARS was unable to process vehicle title applications promptly,  Some vehicle transactions were not possible, MNLARS did not accurately compute some transactions. | (Office of the Legislative Auditor, 2019) |
| Queensland health payroll system failure | $1.25B AUD | Poor leadership,  Poorly planed | People incorrectly paid or not paid at all,  It lead to the resignation of the minister of health and strikes | (henricodolfing, 2019) (Manongdo, NA) |
| Hertz website project failure | $32M USD | No testing,  no documentation,  the company employed to make the website didn’t know what they were doing | 32 million , a lot of time waisted and a lawsuit against the web design company, “Accenture” | (henricodolfing, 2019) |

# Classic mistakes categorised.

## Healthcare.gov

Healthcare.gov was a people-related failure because the people planning the project were overconfident and the white house had set an unrealistic expectation for how the project would go hostile political climate did not help. It was also a process-related failure because they did not use the correct development methodology, they needed an iteration base method but did not use one they also underestimated the size of such a project.

## Phenix pay system.

This was a people-related failure because it was a poorly managed project, and a process failure because its size was underestimated.

## Rhode Island Unified Health Infrastructure Project

This was a process-related failure because when implementing the system they didn’t back up the old system and when It went wrong they had nothing to fall back on the size of the project was aslo underestimated.

## US Depart of Defence Electronic Health Records System

This was a process-related failure because no clear plan was developed before starting work on the project. Tts size was also underestimated, and it was a product related failure because it was unfinished when it was released.

## Electronic Lidl merchandise management and information system

This was a person and technology related failure because Lidl refused to adapt to a different type of system and then tried to take a system and customise it for there way of doing things.

## The Coast Guard's Electronic Health Records system

This was a product and process failure as the process didn’t involve testing the product and when implementing the system, they didn’t backup the old system and a product failure because the functionality was too limited.

## National Grid USA’s Systems Applications and Products in Data Processing

This was a process and product failure as they did not test the product properly, didn’t train enough people to use it when implementing it and the product was too complicated and didn’t work as intended.

## Minnesota's Vehicle License System

This was a person and process failure as there was poor leadership and non-industry standard practice were used when writing the code and test the product.

## Queensland health payroll system failure

This was a people related failure as it was poorly planed and had bad leadership on the product.

## Hertz website project failure

This was a process related failure as no testing was done the product was not documented and the company who made the website for hertz clearly didn’t know what they were doing.

# Classic mistakes to best practice matrix

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Agile  methodology | Backing up old system  when implementing new one | ISO/IEC/IEEE 29119  software testing | comunication plan | retrospectives |
| underestimation of project size. |  |  |  |  |  |
| poor project management |  |  |  |  |  |
| not backup of old system when implemented. |  |  |  |  |  |
| No clear plan |  |  |  |  |  |
| Poor testing |  |  |  |  |  |
| bad documentation |  |  |  |  |  |

# Choice of Development Methodology

All the projects that I think used the wrong development methodology or didn’t use one at all and what they used (if I could find it) and what they should have used.

## Healthcare.gov

Healthcare.gov chose the wrong development methodology. They used the waterfall method when agile would have been a much better choice. They needed iterations, to be able to adapt at any time in the project.

## The Phoenix pay system

This project should have used agile to improve the project management and properly understand the scale of the project.

## Rhode Island Unified Health Infrastructure Project

This project should have used agile to help properly understand the scale of the project.

## US Depart of Defence Electronic Health Records System

This project should have used agile to get a clear plan and help understand the scale of the project, also to get all the features to needed for the project to be viable.

## Queensland health payroll system failure

This project should have used agile to insure they properly planned the project and help with the poor leadership.

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