

**Assignment 2A Value:**

- **30 Points averaged with Assignment 2B as follows:  $(\text{Part 2A} + (\text{Part 2B} \times 2)/3)$**

*So in other words: Assignment 2B counts twice the value of this Assignment 2A*

*Assignment 2B will be distributed separately after this assignment is complete.*

**Assignment Requirements:**

- **Due:** Sunday, April 1<sup>st</sup> by 11:59pm
- **Submission:** Via Individual Assignment Drop Box provided in Blackboard
- **Format:** **Electronic PDF-type Print-image File** formatted in standard US letter size pages by Adobe Acrobat or Compatible Software. Submit the PDF file to Blackboard.
- **File Name:** **IST645S18A2A followed by your last name and first initial.** For example, if your name were John Smith, your file name might be: **IST645S18A2ASmithJ.PDF**
- **Application:** Either the Class Case Problem below, or your own approved project.
- **Tools:** **MS-PowerPoint** software for the development of the overview presentation, but saved as a PDF file format to convert it to PDF. MS-PowerPoint software is required as a basic constraint for this presentation – other presentation tools should not be used.

**(A2A) The Executive Project Overview:**

YOU MAY INCLUDE SOME TEXT FROM THE ASSIGNMENT CASE PROBLEM IN YOUR EXECUTIVE PROJECT OVERVIEW AS APPROPRIATE.

The Executive Project Overview is a way to summarize for executives how you envision the project and some of the basic information about what you will do and why. It is important that you imagine yourself in charge of planning this project, and produce what you think is appropriate information to convince your manager and the project sponsor that you have thought through how this particular project will work, some of the unique issues or challenges that you will face, and how you have planned for ways to address these.

An Executive Overview is generally presented to a group of senior executives of the client organization, and most of these folks are not from IT. Therefore, you should make your presentation understandable to those who will not be familiar with the technology, but there will be your management there as well, so your overview should have enough details to provide them the sufficient information they will need to feel like you know what you are doing in managing the project. Unlike some presentations, the slides contained in this type of presentation usually serve as the handout for the executives to take with them as well – some call it a “deck”. Therefore, this deck should provide enough information to accomplish that purpose.

**Your Executive Project Overview should consist of a PowerPoint presentation, saved as a PDF file, that includes the following specific sections only. You can have more than one slide per section:**

1. Title slide with your name

**Additional slides that specifically address the following with respect to THIS CASE ONLY:**

2. Overview

Instructions: Provide a high-level overview of the project with its business rationale. Focus on the process and product deliverables of the project. This presentation is one of those process deliverables!

### 3. Vision of the Project and Technology Outcomes

Instructions: Describe from your perspective how the new scenario in the company will look with the results of this project. What equipment/software/business practices will be different? What will change for staff or customers of the organization once the project is done? What are the strategic advantages the project will bring?

### 4. Scheduling Assumptions and Constraints

Instructions: Describe any assumptions or dependencies that will have a significant impact on the Project Schedule. These may concern such issues as scheduling dependencies, technology and human resource availability, and third party responsibilities. Describe any limitations or constraints for the project that may impact milestones, task duration, resources, and other areas possibly affected during the course of the project.

### 5. Project Stages

Instructions: Describe the linear flow of the project – what stages have you done, or will you go through, to create the project and process deliverables. NO dates should be put on these stages at this time other than the specific constraint dates mentioned. This is a descriptive summary of how you have sequenced the project activities to get things done right.

### 6. Quality Planning, Quality Assurance and Quality Control Approaches

Instructions: Describe the approaches you will take to ensure that this project will produce quality deliverables (process and product).

### 7. Executive Involvement and Support Needed

Instructions: Now that you have described the project in detail, what are you expecting from the various executives that might be in attendance? In this last section, you can refer to names if you have them, or to business functions if you don't have the names. (For example, "Building Maintenance Team", or "Shipping/Receiving Dept.", or "Accounting".)

### 8. Closing Slide and Opportunity for Questions

#### GENERAL GUIDELINES FOR ASSIGNMENT 2A:

1. **You do not need to recreate the previous assignment 1** Charter/Scope or WBS deliverables for this section of the assignment.
2. **The Executive Project Overview presentation must be appropriate, and limited to, THIS CASE PROBLEM.** You should apply your learned knowledge to this situation and develop a presentation that you think is best for this situation.
3. **Assignments should not contain generic material imported from other consulting companies or other sources** as this is not appropriate for this situation and will cause you to lose points. While you can use help gained from research, your document must reflect only your own work, and must be matched to the content and scale of the assigned project case only! Templates found online are not appropriate for assignments in this class.
4. **Do not insert people, companies or resources into the case that are not already there, but you should include names of people who will serve certain roles in the project, both internally and externally.**
5. **Do not submit information in your assignment given to you by other students, or students who took the course previously.** I will recognize these, and this is a **violation of academic integrity!**
6. **Produce this presentation on your own like that you would actually submit on the job.** Your assignment will be graded as a professional work assignment, so be sure you think through what would be needed as though you were producing this for your boss!

7. **Note: DO NOT PRODUCE THE ACTUAL PROJECT SCHEDULE DATES FOR THIS ASSIGNMENT.** This is an Executive Project Overview only – not a schedule! Only dates that represent constraints should be specifically mentioned. Assignment 2B will provide more final information on the project so that you can then complete the actual project plan and schedule with that information.

**Don't get distracted with a technical solution** – think instead about what you, as a Project Manager, and your team should do, even if you don't know how the technology components or project steps will all be at this point. If you aren't familiar with the technology concepts, technical terms or approaches, please ask for help. **There is no single, correct “answer” to this assignment. Rather than make you guess a predetermined solution, I want you to think out the problem on your own and develop a deliverable that you consider best. I will evaluate what you have included, how you have structured it, the way you have imagined the project as defined by the case problem, and how well you have conveyed that vision to your executive audience.**

*The highest scores on this assignment will be for an Executive Project Overview presentation containing professional-style slides that present executive information specific to this project in light of this project's requirements and deliverables, names specific people and roles where appropriate, addresses the practical issues that exist only in this case, and that will show that you have thought carefully about how you want executives to think about the project and your management of it.*

## **CASE PROBLEM: Integration of Factory Analytics at Nolte Manufacturing**

### **NEW INFORMATION FOR ASSIGNMENT 2A – Executive Project Overview**

*The following is some additional information regarding the project for this specific assignment:*

Your Charter-Scope Document was approved, and the project is now in progress. Doug Coster has decided to move up the special Executive Overview presentation to a new date of Thursday, April 12 instead of May 11. In this presentation, Doug said that it is not important to present full budget information or detailed project dates because there will be a separate budget meeting on May 11 with just the Board in attendance when those details will be reviewed. Instead, this April meeting is to set the stage with an overview of the project and the technologies involved. The attendees at this meeting will include a mix of Nolte's executives representing all major divisions of the company, as well as members of their Manufacturing Advisory Board (a combination of manufacturing process experts and members of the Nolte Board of Directors).

Greg Harrison asked YOU to develop and deliver the presentation from the perspective of the IT side of the project, and now you have to prepare a draft for his review. The presentation is supposed to be in executive “deck” format typical for business presentations of major initiatives, and should be planned to last about 45 minutes, with an additional 15 minutes for questions. You are to include your vision for the project from your perspective as the Project Manager on the IT side. Doug Coster has also asked Production Manager, Norma Wilson, to provide a similar presentation on the manufacturing process side, outlining some specific process changes that will be taking place within the factory based on the incorporation of the new technology from Sight Machine. Other than those specific manufacturing processes, your presentation should provide information about the project as it impacts Nolte overall, particularly about the deliverables you've been asked to complete, and how the project itself is going to be planned and managed.

In order to be ready for next week Thursday, Greg wants a draft of your presentation by first thing this coming Monday morning. You know him well enough to know that this really means you have to submit it by no later than Sunday night! Now you need to get busy - the clock is ticking...!

### **END OF NEW INFORMATION FOR ASSIGNMENT 2A**

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**ORIGINAL CASE INFORMATION TEXT: (this section repeated from assignment 1)****CASE PROBLEM: Integration of Factory Analytics at Nolte Manufacturing**

Information below on the companies was obtained and adapted from their respective websites; links listed in the profiles:

**Nolte Precise Manufacturing**, <http://www.nolteprecise.com/> located in Cincinnati, Ohio, provides custom precision machined and assembled components to original equipment manufacturers and offers a total supply chain solution, using CNC lathe, CNC mill, CNC Swiss, automatic screw machine, and assembly processes. Nolte evaluates the entire manufacturing process, finding and recommending efficiencies that result in a reduction in total cost of ownership for clients, including process and engineering reviews, inventory management, and assembly. It is Nolte's mission to become their client's ideal supplier through superior service and value that lowers the client's total cost of ownership. Nolte has been providing contract manufacturing services for nearly 100 years. While it remains true to its founder Lou Nolte's value system, the business continues to evolve, adapt, and innovate to remain an industry leader.

**Sight Machine**, <https://sightmachine.com/company/> located in Ann Arbor, Michigan, is used to make better, faster decisions about their manufacturing operations. Sight Machine's analytics platform, purpose-built for discrete and process manufacturing, uses artificial intelligence, machine learning, and advanced analytics to help address critical challenges in quality and productivity throughout the enterprise. The platform is powered by the industry's only Plant Digital Twin, which enables real-time visibility and actionable insights for every machine, line, and plant throughout an enterprise. Founded in Michigan in 2011 and expanded to the Bay Area in 2012, Sight Machine fuses the spirit of Silicon Valley technology innovation with rock-solid Detroit manufacturing.

You are a project manager for Nolte Precise Manufacturing, reporting to the VP of Finance, Greg Harrison. Production Manager, Norma Wilson and the VP of Sales, Mat Jackson, were recently discussing the fact that with the big aerospace parts contract the company landed in 2017, it might be time to use that capital to invest in the future of manufacturing systems, looking forward to becoming an eventual "smart factory".

So, with the approval of President Doug Coster, as well as Greg Harrison, Norma and Mat met with you and Manufacturing Process Engineer, Ray Bellman to lay out the initial concept of a first-phase trial of some smart-factory technology. The leader in the field for your size company is Sight Machine, and they have a Manufacturing Analytics system that is based on big data analytics that would provide a great entry-point into this technology.

See Youtube video: <https://www.youtube.com/watch?v=x8hQzBFkRk>

See Product Information: <https://sightmachine.com/product/ema/>

Ray suggested that the best place to start would be on the computer-based machining equipment, including the CNC Milling, Swiss Machining and CNC Lathe Turning equipment. These machines would be the best to convert to IoT technologies needed for the Sight Machine analytics software. There are 34 machines in this manufacturing line that will participate in this first roll-out.

In addition to the integration of Sight Machine technology into the factory, Greg Harrison also wants you to develop an extract from that system and link it to the existing JobBoss manufacturing control system to develop financial analyses for him. Particularly, this would involve a custom-developed database that would allow for the following three special reports that would be unique to Nolte Manufacturing:

- Product Cost Analysis
- Employee Efficiency Analysis
- Profit Analysis by Product

Finally, you need to ensure that the shift supervisors and CNC machine operators are properly scheduled for Sight Machine training well in advance of the final implementation.

The contract with Sight Machine has already been developed and signed, so that is not a part of this project schedule. However, it is known that the additional data needed for this new analytics process is well beyond the existing capacity of the Nolte servers running JobBoss. So, Sight Machine will also be assisting you with Cloud-based storage of this data using services that they will provide.

So far, there is no specific time or cost constraint because the first required deliverable of your project is to come up with a project plan and estimate that can be approved, and a project overview presentation for the executive group and the Board of Directors. Greg believes that the company will have the money, but there may be some project adjustments once it is determined what the full cost might be. The project plan and budget have to be in to Greg by April 30<sup>th</sup> in order for the Board presentation and materials to be ready for the May 11<sup>th</sup> Meeting. If all goes well with this decision, the project will continue to completion, with the first implementation step starting on June 1, 2018 and beyond, following the approved project plan.

You will be working directly with the following Sight Machine technology staff:

- Chris Dobbrow, SVP, Sales
- Kurt DeMaagd, PhD, VP, Analytics
- Ryan Smith, PhD, VP, Engineering
- Curtis Kellman, Client Implementation Technology Analyst

Your Nolte Manufacturing project team right now consists of the following people:

- Mary Gibson, Manufacturing Systems Analyst
- Yi Wang, Programmer
- Lamont Wilson, Senior Programmer
- June Petersen, Database Administrator
- Krishnanand Naik, Reports Systems Programmer/Analyst
- Paul Johnson, Testing Specialist
- Christina Kutty, Senior Testing Specialist

Of course, in your plan you also need to include specific steps and processes for:

- Regular Meetings with the team, stakeholders, and cross-impacted areas of the company.
- Approval points as needed through the project sequence.
- Points at which you will refine cost and staff assignments (you do not need to calculate costs or assign staff at this point in the project)
- Points at which you will produce the various Project Plan documentation deliverables discussed in class.
- Quality management approaches, including testing and provisions for re-work.
- User training and other preparations for system implementation.
- Final reports and other closing processes for the project.

**END OF ORIGINAL CASE INFORMATION AS GIVEN FOR ASSIGNMENT #1**