Integrated Digitalization - Westinghouse CM Application

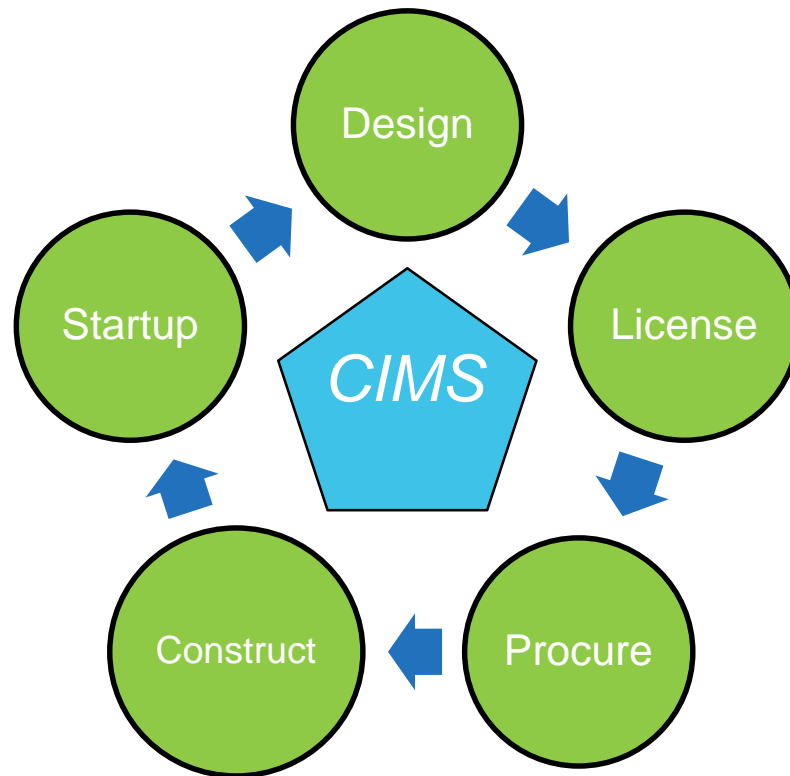Emily Sabo - Principal Engineer

AP1000 Configuration Management and Information Management Systems

Carolyn Domitrovich - Principal Engineer

AP1000 Configuration Control and Design Release

Westinghouse

Westinghouse **AP1000**™ CIMS

The Westinghouse AP1000 Plant Configuration Information Management System (CIMS) software creates, stores, maintains, and delivers configuration information to support all phases of the AP1000 plant.

Westinghouse
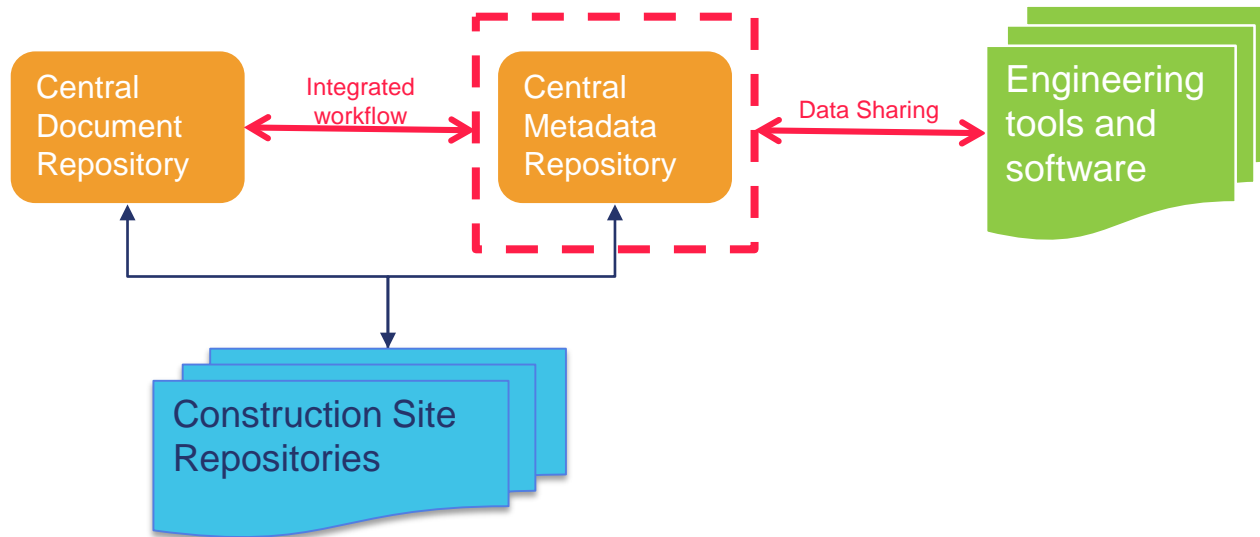
Active Construction Projects

- CIMS Software is critical to success of construction
  - Over 220,000 design documents for each unit
  - 100 changes (non-conformances and field changes) per week per active project

- Active Project Phases:

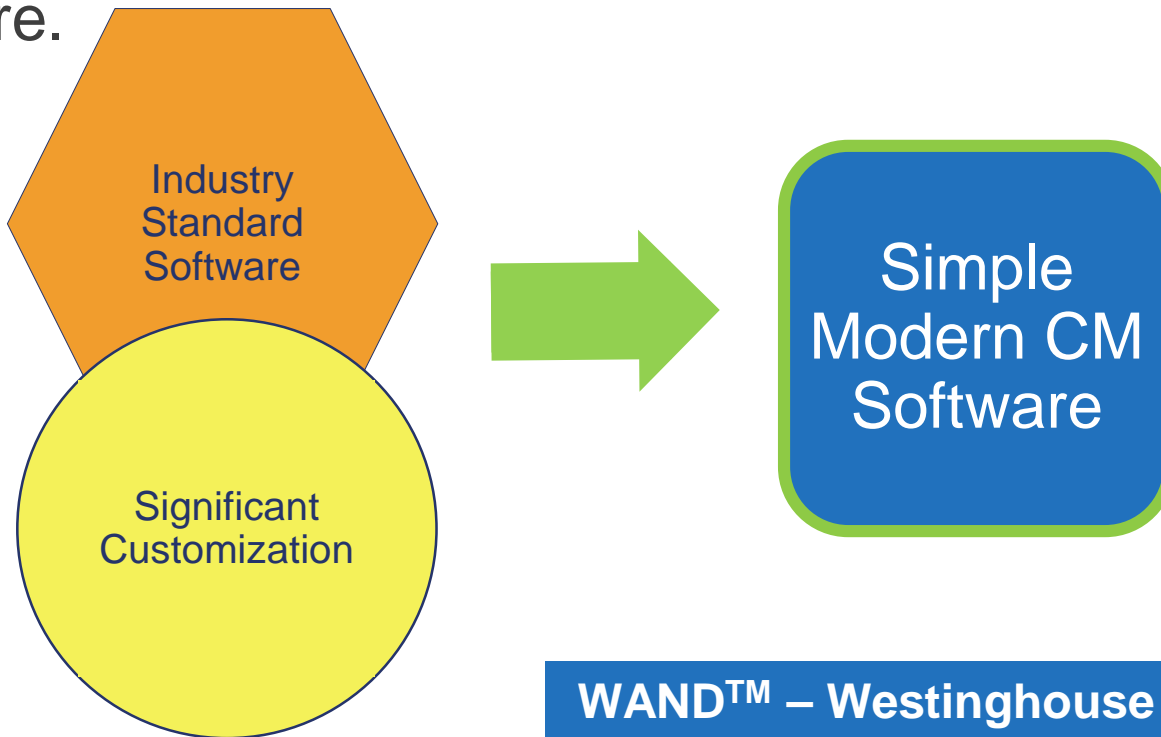|	Design	Construction	Turnover	Operation
4 China Units				
Vogtle 3				
Vogtle 4				

CIMS Software Replacement

- Replaced Central Metadata Software System in the midst of active construction projects
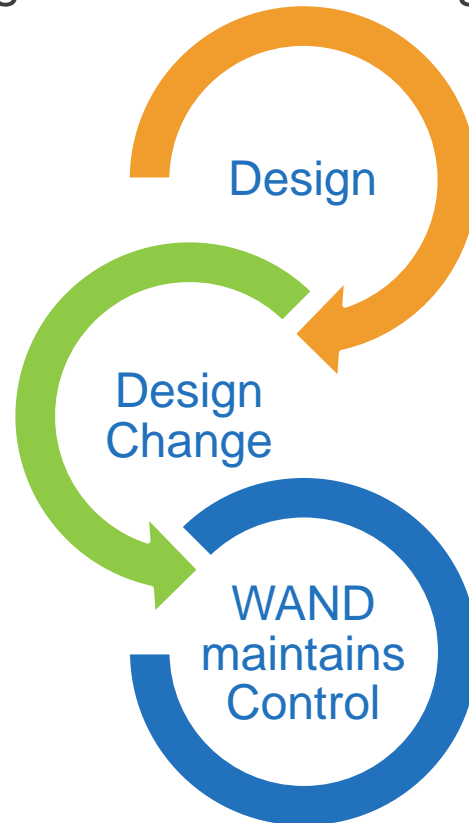

Westinghouse

CIMS Software Replacement

- Industry standard software had been used and customized for 10+ years. This was replaced with in-house designed software.
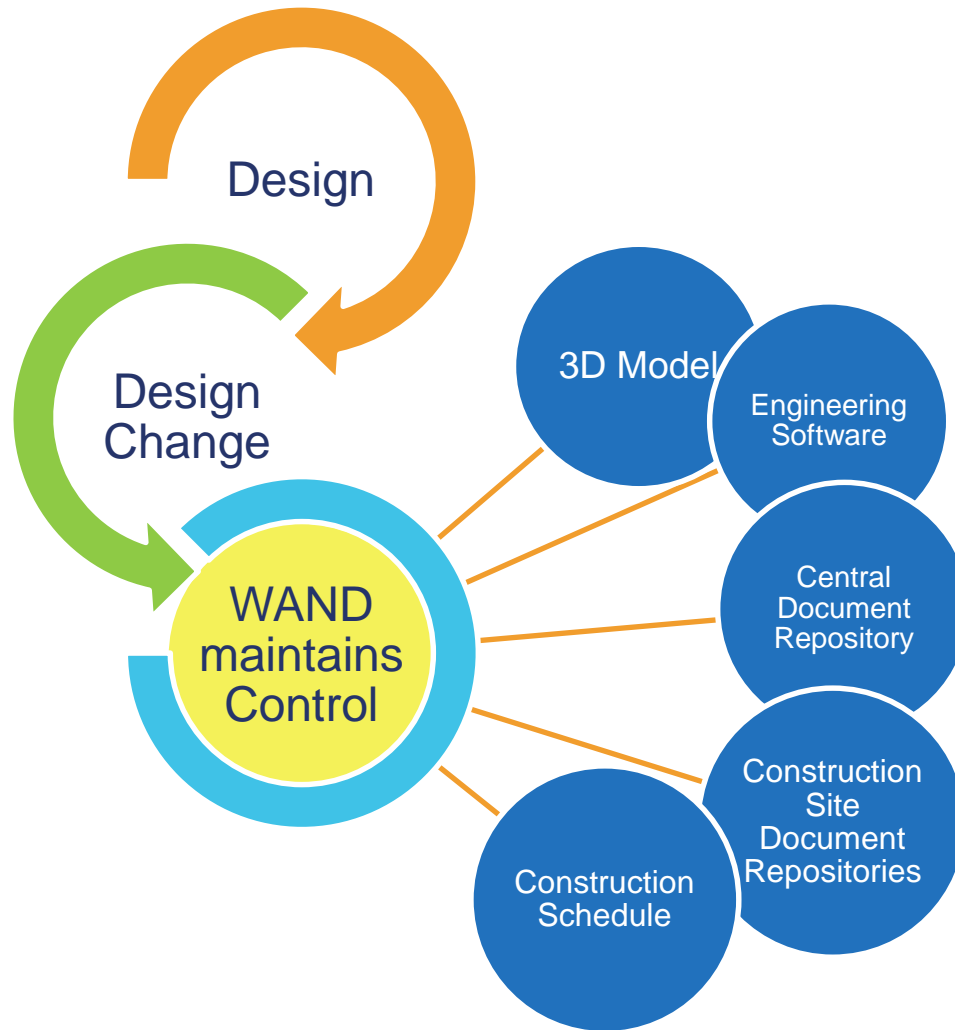
Industry Standard Software

Significant Customization

Simple Modern CM Software

WAND™ – Westinghouse AP1000 Nuclear Document Control and Configuration Management

Westinghouse

WAND – Westinghouse AP1000 Nuclear Document Control and Configuration Management

WAND is an intranet based application that organizes data into tables. Procedural requirements are programmed into WAND to perform required validations, maintaining control of the design and design changes.

Design

Design Change

WAND maintains Control

Westinghouse

WAND – Additional Enhancements

Why

Why We Did It

Westinghouse
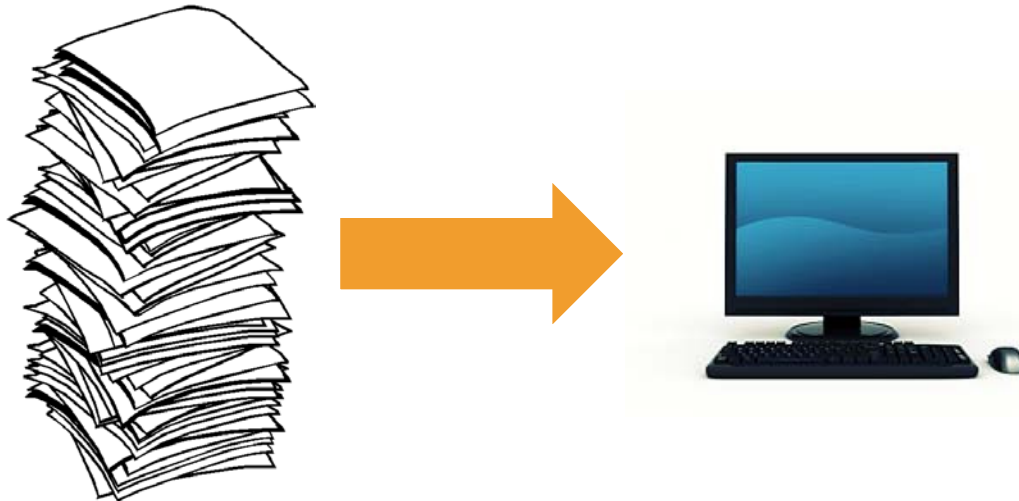
Why the decision was made to change the CM tool

- Organization moving to a digital platform (e.g., WEMMEX) and we needed a CM tool to be adaptable for the change.

- Current industry software could not accommodate our desired speed and could not take us to our future vision.

- We envisioned a system that could interact with other systems, both internal and external to the company

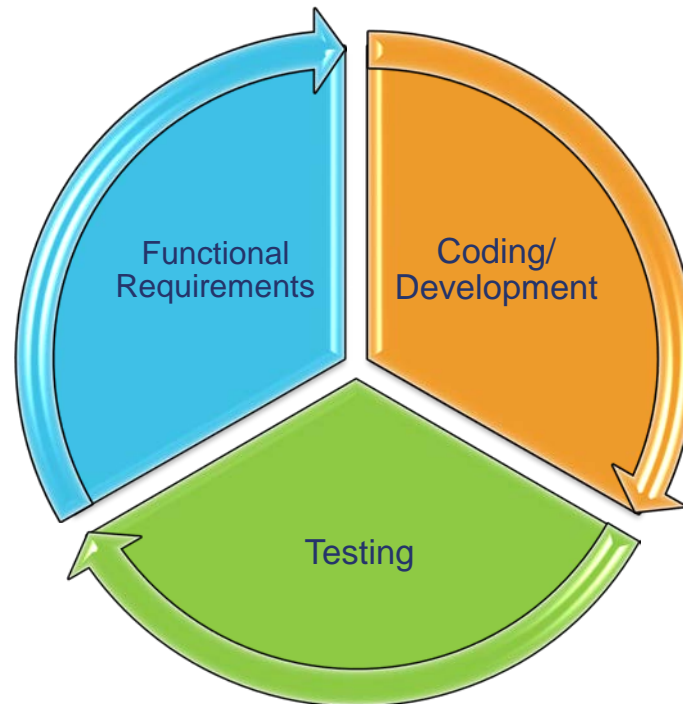# How

How We Did It

Westinghouse

How we transitioned to a new CM tool

- Created a Project Plan to identify the key objectives that included eliminating and improving existing processes

- Gathered valuable input from end users and Engineering organizations.

- Began data mapping as early as possible in preparation for transition from previous system to WAND.

- Embraced ability to design software around existing company CM processes.

- Used Agile Software Development

Smooth, no-impact transition

Westinghouse

How we transitioned to a new CM tool

- Agile Software Development
  - Project divided into "Sprints"
  - Efficient and face-to-face communication
  - Short feedback loop and adaptation cycle
  - Quality focus

Westinghouse

What

What We Learned

Westinghouse

What we learned from the transition

- Involve end-users very early in the development of functional requirements
- Know the end goal (full digitalization) and make sure every upgrade gets us closer to that goal
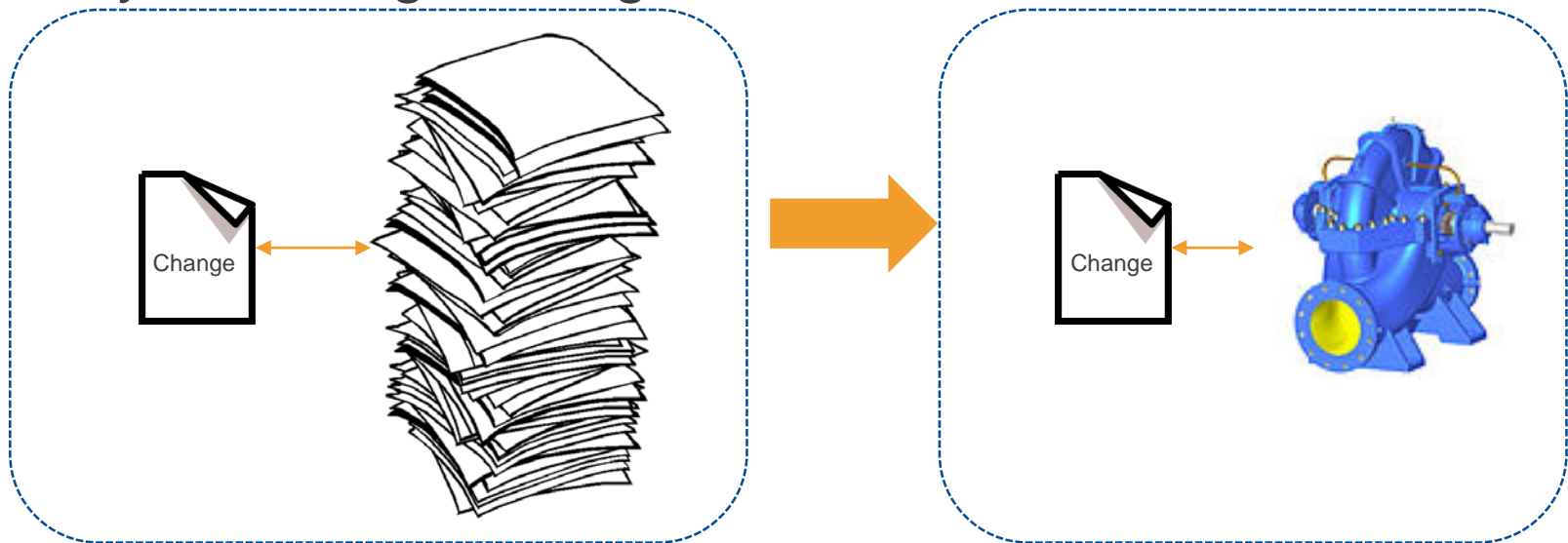- Agile Software Design method works very well

Where

Where We Plan to Go

Westinghouse

Westinghouse's Future Vision

- Centralized CM in WAND, integrated with existing and future digitalized systems

- Manage data in database/metadata space rather than on document images

- Ability to manage change on a more detailed level

Demonstration

How WAND Integrates with the AP1000 3D Model

Westinghouse

Demonstration

Demonstration

Questions

Emily Sabo

saboek@Westinghouse.com

Carolyn Domitrovich

domitrcm@Westinghouse.com

Westinghouse