



USFS RESTORATION EFFICIENCIES

BENEFIT AND VALUE OPPORTUNITIES TO INCREASE THE SCALE AND
PACE OF RESTORATION

INTEL FELLOW SUPPORTED BY THE NATURE CONSERVANCY

AGENDA

- Introduction
- Goal
- Data and Methods
- High Level Process Timeline
- Key areas and observations
- Summary

INTRO - MY SKILLS AND FOCUS AREAS

- TNC saw the need for this analysis a few years ago and arranged this opportunity through Experience Matters
- The biggest Lessons Learned at Intel - we **MUST** accelerate the **speed** at which we **change** to meet market conditions - Catastrophic Wildfire and Climate Change are our market conditions
- Informed Risk Taking and Focus on efficiency was everyday Intel expectation
- Strict change management procedures were necessary

GOAL

- Communicate areas of focus which will lead to increasing the pace and expedite restored conditions
 - Design minimal and agile processes that will scale to the level required
 - Create the means to survey, designate and cruise at scale
 - Generate contract coverage for year on year product inventory

Components

GAPS

- Value Restored Condition
- Not on Timber Emphasis is on Value of timber
 - Appraisal Process
 - Cruise Process
 - Log Accountability

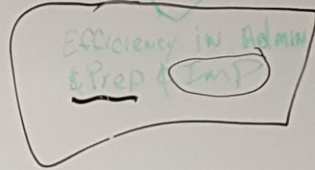
Getting to Scale & Provide Certainty

Streamline

↓ Costs

Share Risk

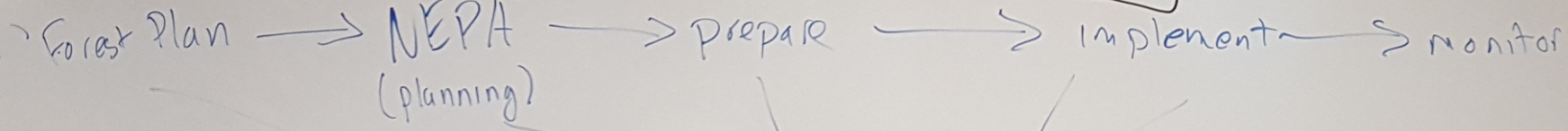
\$ Risk is all on Contractor



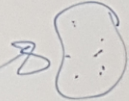
↓ Risk of Fire

Eco Services

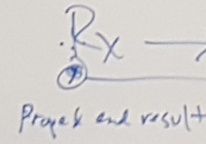
Mike For TNC



Law Regulation Policy



Current trends



Designate
Paint
DxP
Bidding

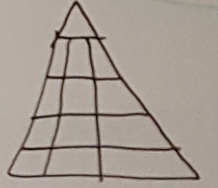
assign value
↑
cruise
↓

assign value
↑
appraise
↓

sale/pedige

offer

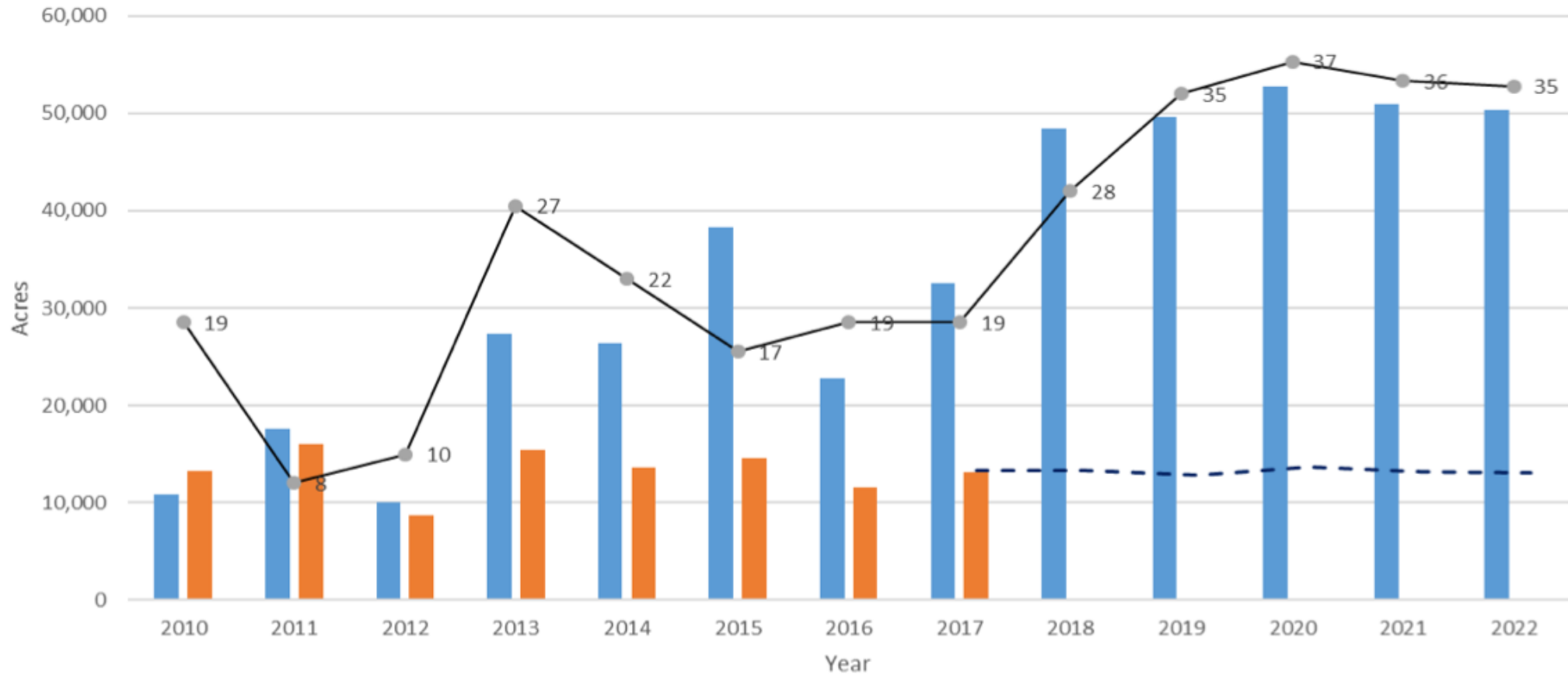
award



METHODS/SOURCES

- First 3-4 months was spent learning about the NEPA to Thinning process with focus on Timber, Designate, Cruise, Appraisal and Sale Prep
- 1:1 interviews both in the office and in the field
- Focus on validation of existing process steps and areas of improvement opportunity
- Continuous refinement of the MS Project Task Order project file
 - Representation from TNC FS Regional, all 4 forests, 4FRI Team, Forest Service individuals in Payson, Pinetop, Williams, Albuquerque, and Flagstaff representing District and Deputy District Rangers, Regional and District Foresters, Silviculturists, Innovators, Sale Admins, Appraisers, Monitors, ERI, NAU researchers, Industry reps, Loggers, Trees, Drivers

4FRI Acres Offered / Harvested 2010-2017 and Projected 2018-2022



Acres Awarded and Number of Sales/Contracts

Acres Harvested

Contracts

8 per. Mov. Avg. (Acres Harvested)

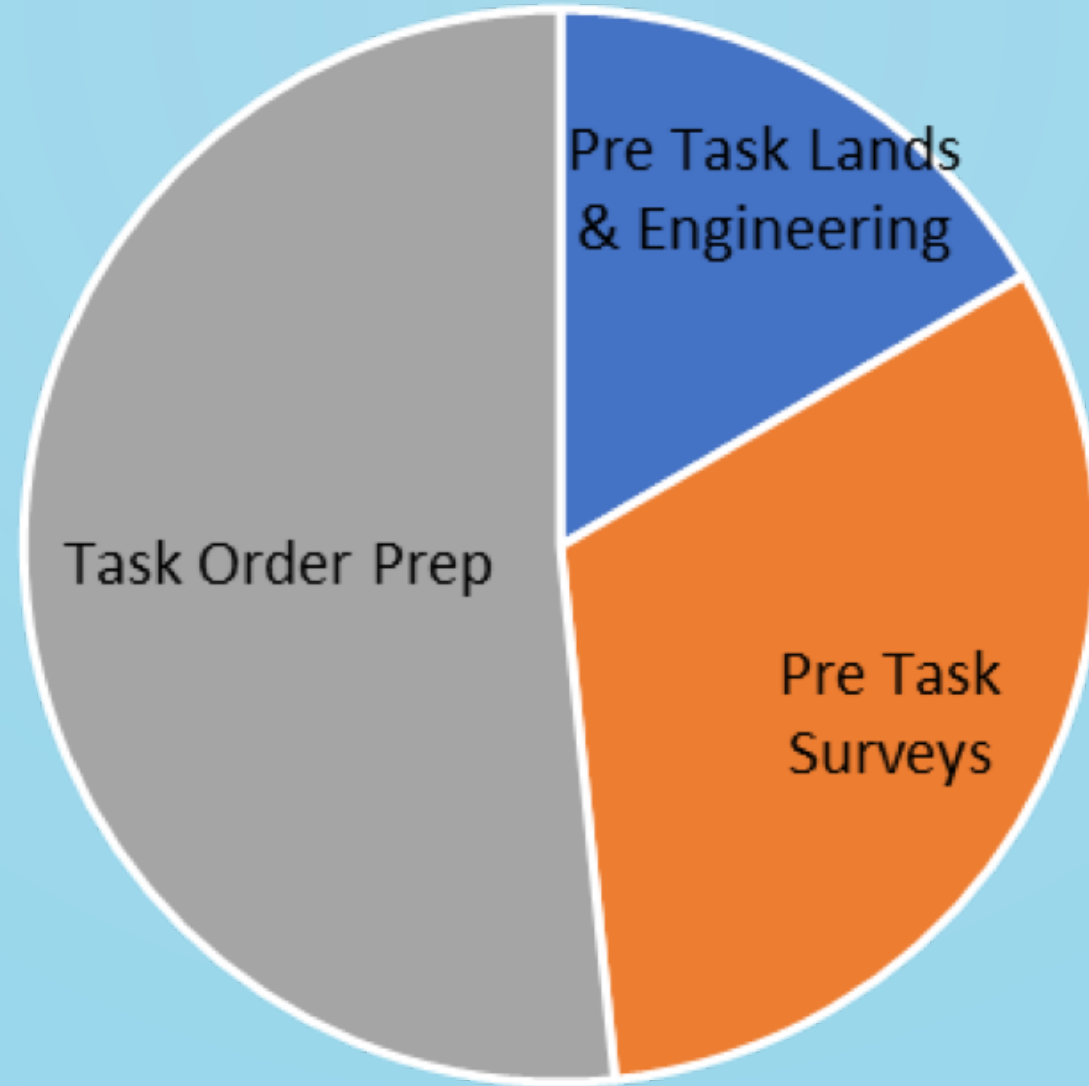
NEPA TO THINNING TIMELINE

Credit for the initial MS Project development goes to Debra Mollet - Coconino NF

- Pre Task Land and Engineering
- Pre Task Resource Surveys
- Task Order Preparation
- Implementation
- Post Implementation

Task Name	Duration
▲ TASK ORDER EXAMPLE "Not typical Timber Sale"	484 days
▲ PRE-Task - Lands and Engineering	72 days
ID IMPLEMENTATION BOUNDARY AND PRIMARY HAUL ROUTES	1 day
▷ Landline Survey	59 days
▷ Landline ROW Simple assumes critical issues resolved	66 days
▷ Engineering	10 days
▲ PRE-Task - Surveys	138 days
▷ Caves	4 days
▷ Archaeology	138 days
▷ Wildlife	29 days
▷ Botany	53 days
▷ Caves	75 days
▷ Engineering getting things ready and generally up to standard	26 days
▲ Task Order Sale Prep	262 days
▷ Initiate Plan In Hand Review specific to NEPA requirements	15 days
▷ Silviculture Rx development	43 days
▷ Timber - Layout, Mark, Cruise	144 days
▷ Prepare Contract	247 days
▷ Implementation	245 days
▷ Post-Implementation	262 days

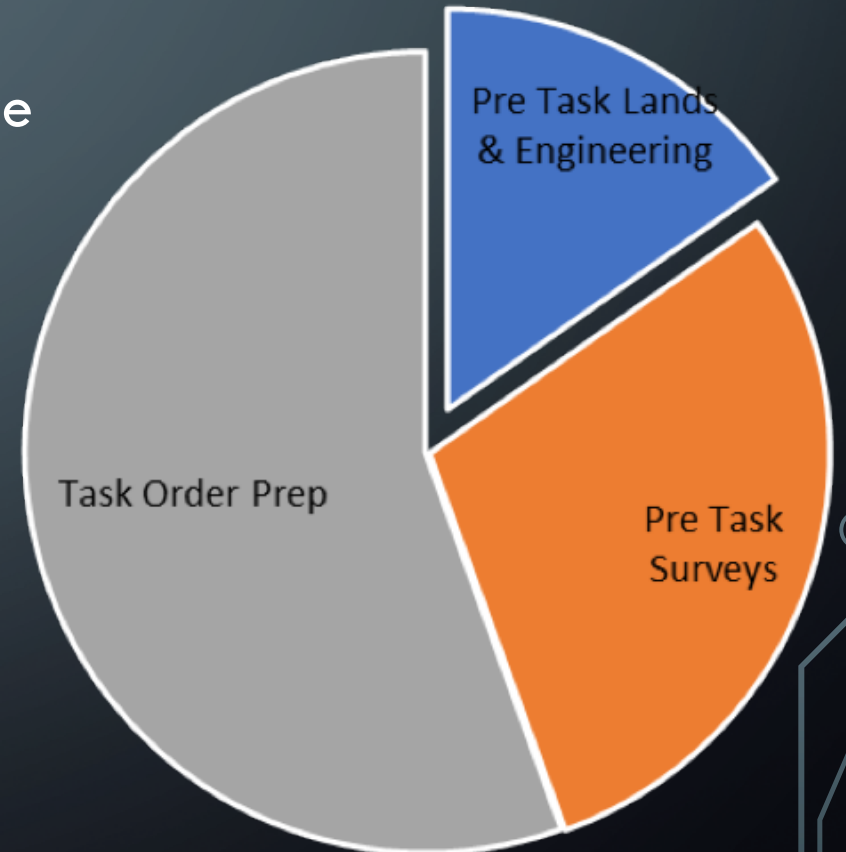
Time spent in three key areas



PROJECT DESIGNATION AND RIGHT OF WAY LANDLINES

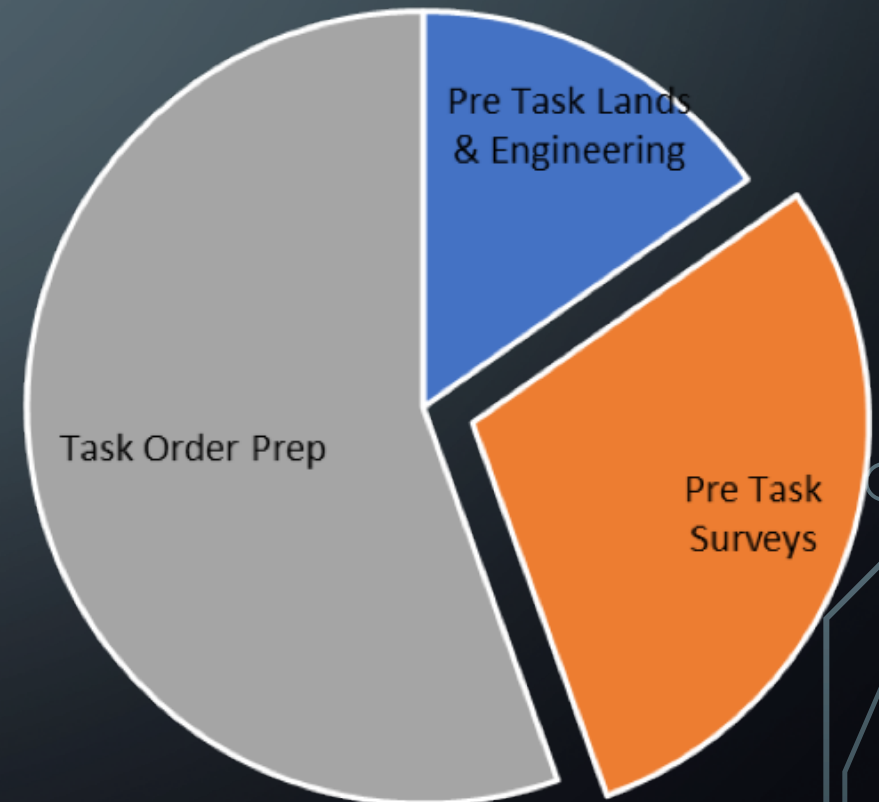
PRE TASK LAND AND ENGINEERING SURVEYS

- Smallest of the administrative efforts
- Assumed this effort is sometimes started two or more years in advance including setting parcel boundaries and any Right of Way



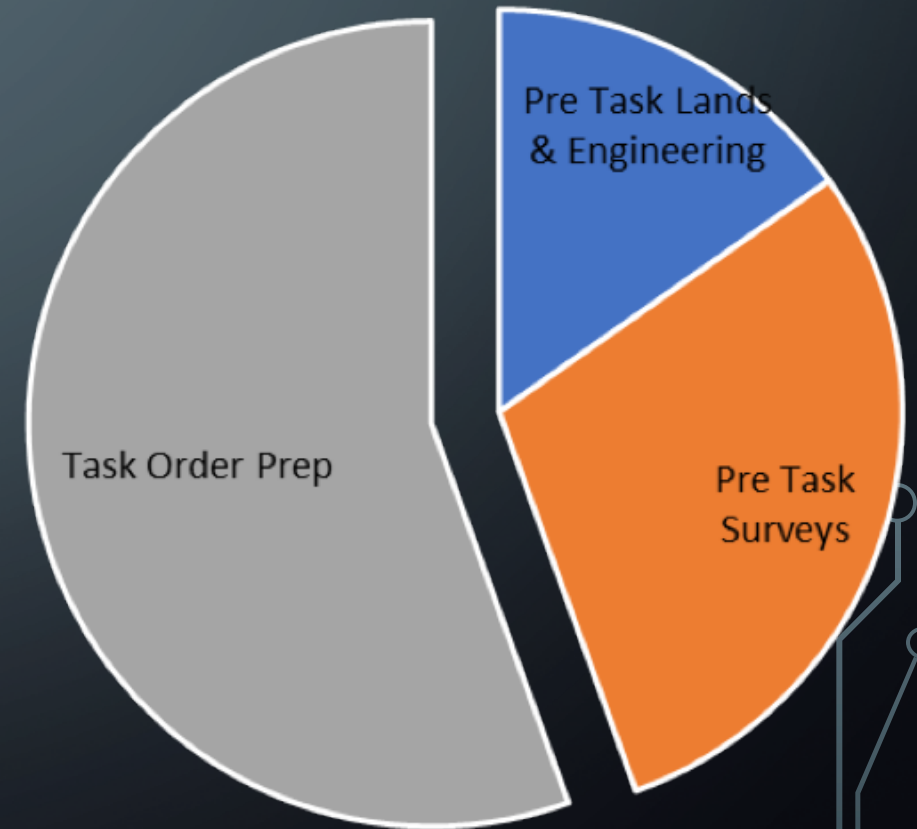
PRE TASK ORDER SURVEYS

- Second most significant process time event
- How does this look when we scale to 10k, 20k or 50k ac parcels

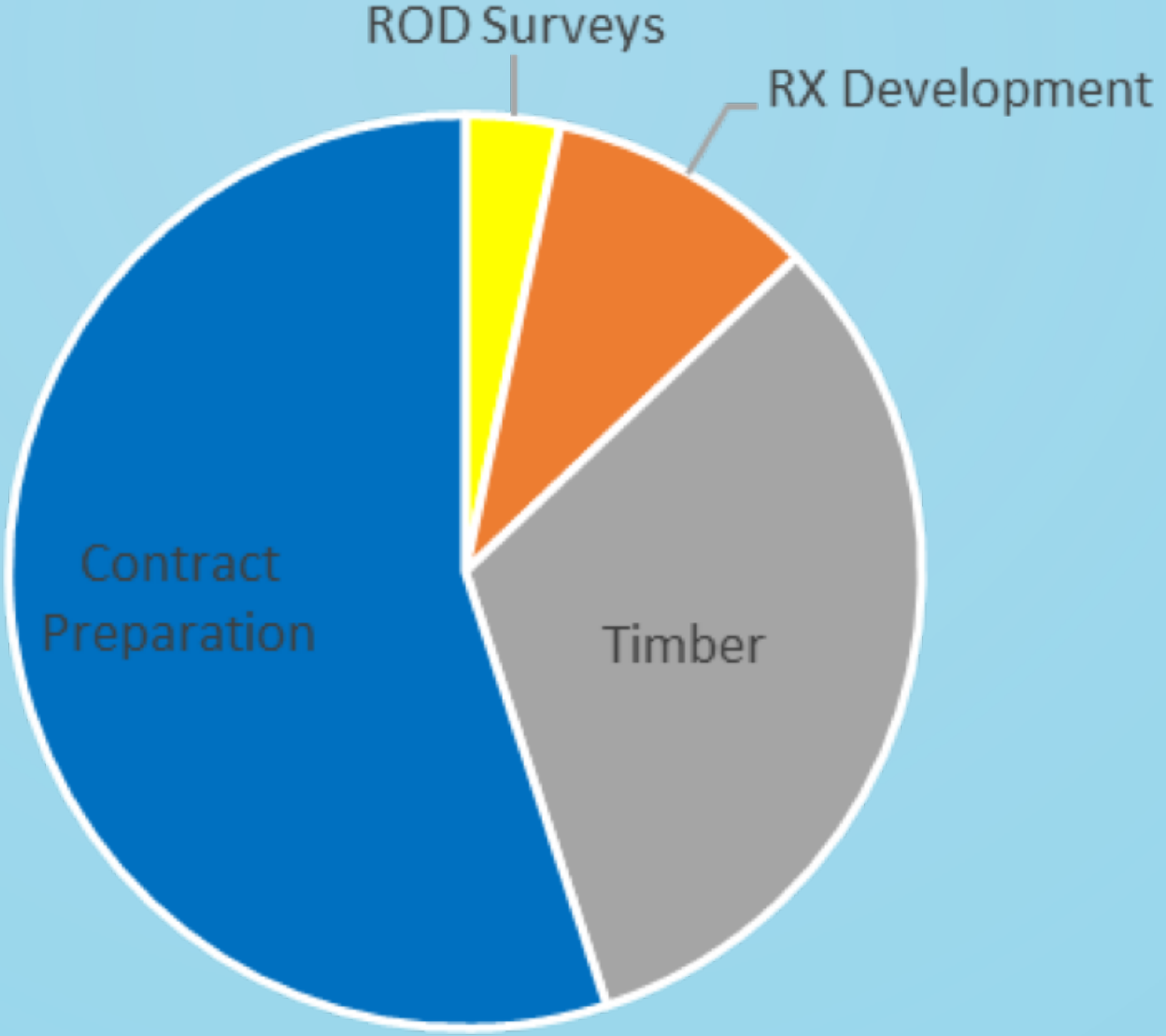


TASK ORDER PREPARATION

- Broken down into distinct subtasks
 - Prescription development
 - Timber
 - Layout refinement
 - Mark
 - Cruise
 - Sale preparation
 - Contract preparation
 - Appraisal



Sale Preparation



PRESCRIPTION DEVELOPMENT

- This area appears is significantly impacted by scaling
 - Rx creation 8.6 wks to 86 wks (1.65 years)
- We can continue to see significant gains IF we;
 - Educate FS and public on our restoration goals specific to Prescription objectives
 - Design processes that compliment the restored condition rather than volume
 - Focus our efforts on continuous improvement by experimenting with virtual methods of evaluation after the fact (try something, evaluate results, refine)

TIMBER - MARK / CRUISE

- Focus is on volume, valuation and detailed prescription creation on the ground
 - Layout/Mark/Cruise 28.8 wks to 288 wks (5.5 years)
- Simply throwing resources at a problem will sometimes get the work done faster but does nothing for improving efficiencies

APPRAISAL AND CONTRACT CREATION

Clarify and revalidate what the REAL risk is - who bears the risk vs. who owns the risk

- Implement single master template which covers any type of large scale restoration project – (haul roads, general prescriptions, legalities, etc.)
- As long as we continue to cruise at the current level to support appraisal it will present challenge to scaling
- Evaluate the need to go into such detail for prescriptions and roads
- Complexities of our roads packages
 - The road packages are a significant time and \$ sink – Look for less complex solutions

TAKEAWAYS FROM THE STUDY

- Surveys, Prescriptions and Sale Preparation activities are top three time sinks
- Common throughout is some level of duplication of effort required for each sale
- DxP/Tablet Technology, a step in the right direction but may not get us to scale
- Agency's structure does not always enable agile planning, communication and execution which is required to generate and maintain the pace needed to get to scale

SUMMARY POINTS TO PONDER

- Is it feasible for the FS to administer ~ 40 contracts /yr. when we get to 50k ac
- Paradigm shift needed away from timber valuation to the restored acre
- How to continue to innovate current practice of prescription creation and application
- Identify new / agile processes in other areas that will scale to the level needed
- Look for opportunity for modernization & improvement throughout the process
- Develop ability to generate 50,000 acres of contract coverage Year on Year
- Clearly identify risk and mitigation from a modern and localized perspective



QUESTIONS

