Models in Business Analysis
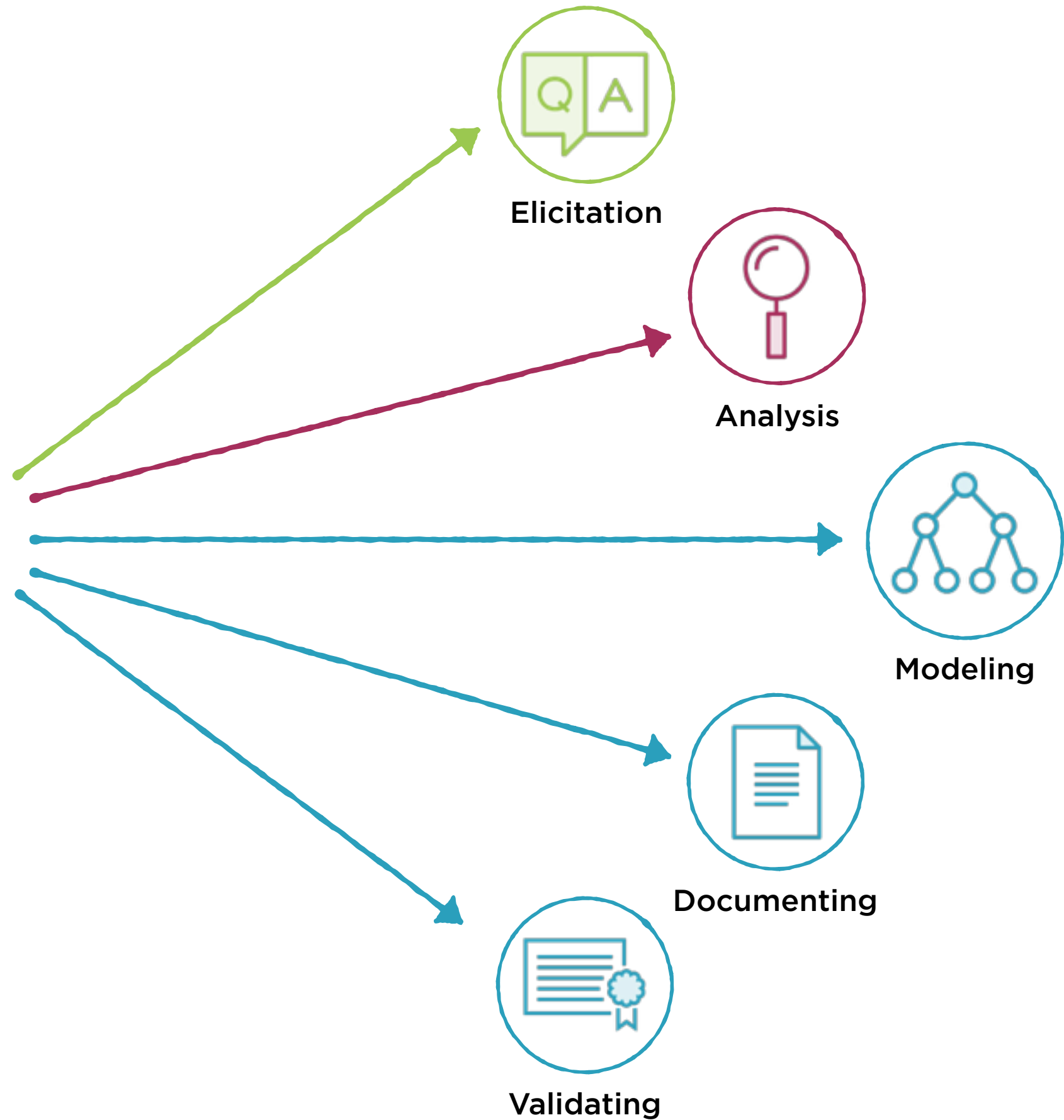
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Elicit, document and manage stakeholder requirements to meet business and project objectives

Elicitation

Analysis

Modeling

Documenting

Validating

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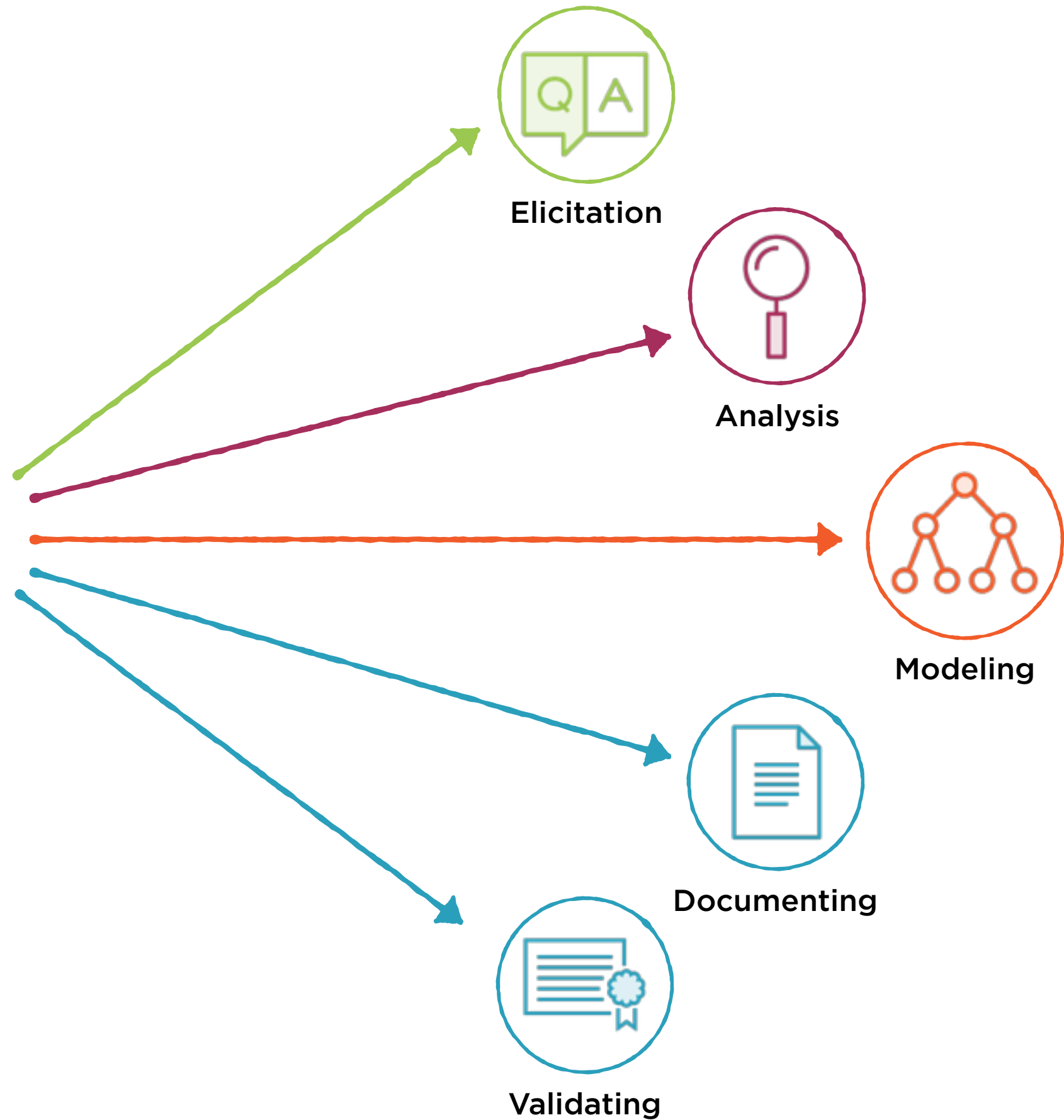
What's Ahead

The Purpose of Models

Types of Models

Choosing Effective Models

The Language of Modeling

The Purpose of Models

"...visual representation of information... [that can] efficiently arrange and convey a lot of information in a concise manner."

Meeting Notes

Call comes in – answered or hangs up (too long wait)

Budget cuts??

CA determines eligibility, records info – INTERNAL ONLY DB

Claim Adj. scheduled if time matches – too few times avail.

Budget cuts?? Need more adjusters before 9 / after 5

Claim info saved if no appt made
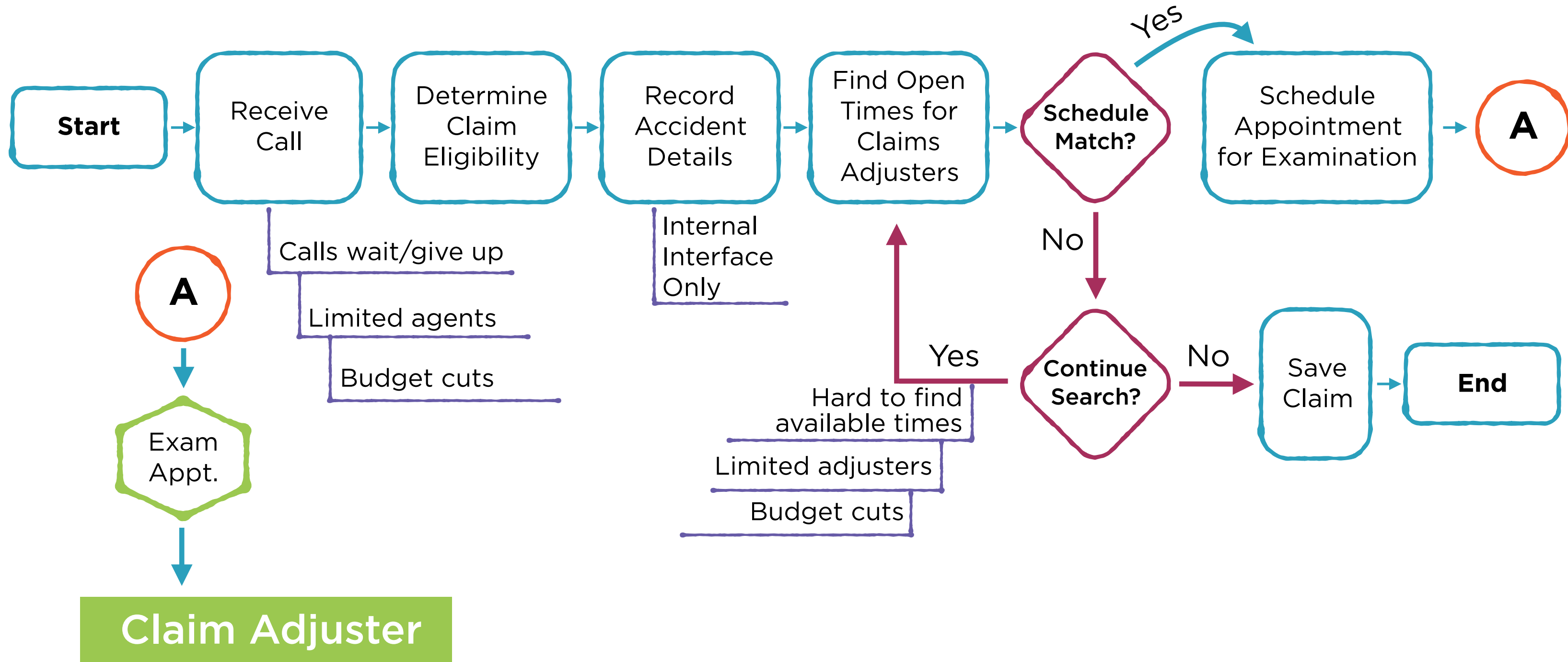
Structured Narrative

When a call comes in, the telephone claim agent may receive it or the caller may give up after being on hold for too long. If they give up, it's likely because we have too few agents, which is directly attributable to budget cuts.

Those callers we speak with then may have the eligibility of their claims determined, and accident details are recorded by the claim agent into an interface internal to the phone claims department. Based on their determinations, the claim agent may then find an open time for a claim adjuster to assess the claim in person.

If there is a schedule match, this appointment time is sent on to the claim adjuster. If there is not a match, the claim may be saved for later scheduling.

Many of the reasons claims are not immediately scheduled for adjustment boil down to a limited number of adjusters, attributable again to budget cuts, which can make it difficult for appointments to be scheduled outside of normal business hours.

Telephone Claim Agent Workflow

Figure 2-6. "Process Flow with Root Cause Analysis Example" *Business Analysis for Practitioners: A Practice Guide*, Project Management Institute, Inc., 2015, Page 24

Purpose of Models

May be used to help understand and determine...

Business objectives

Requirements

Business rules

Design considerations

Purpose of Models

Provide more easily understood context

Helpful in identifying gaps and discrepancies in knowledge

Useful in eliminating unneeded information
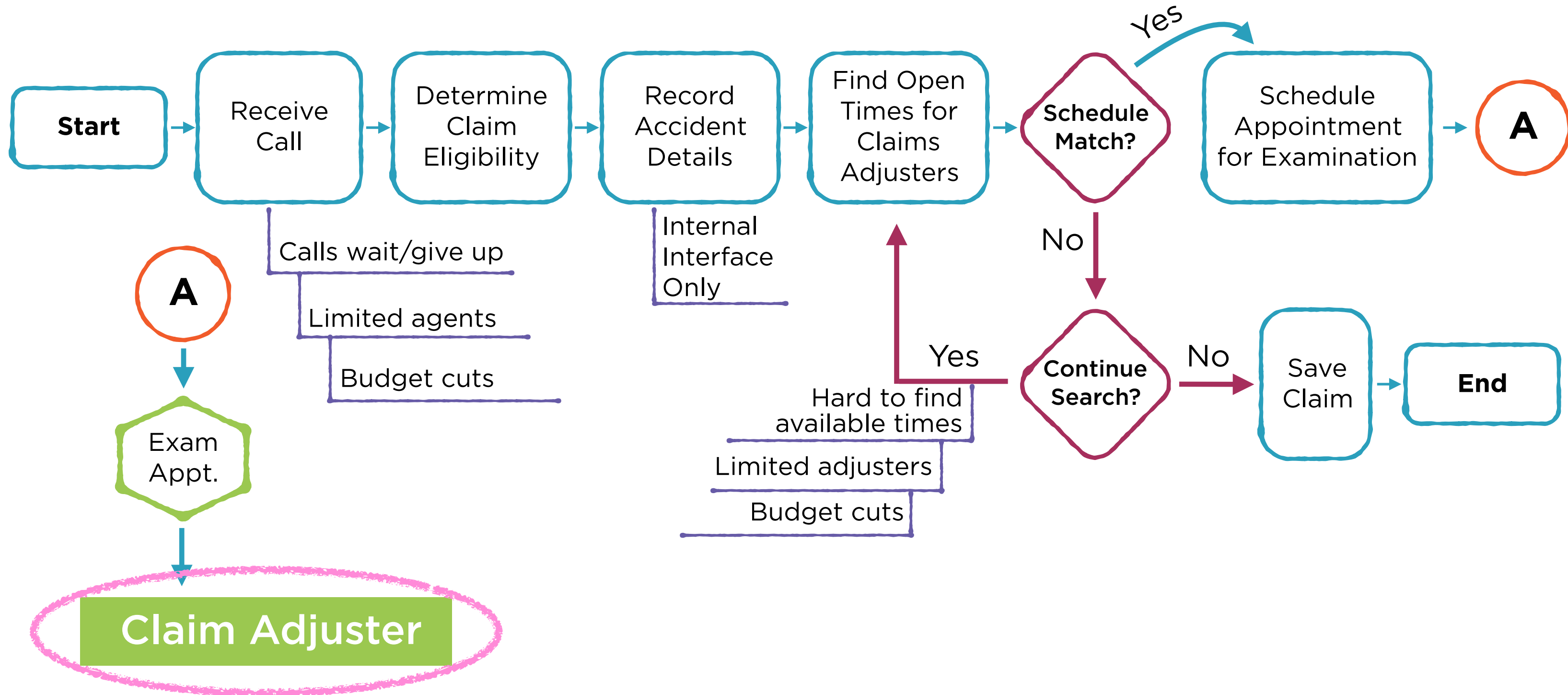
Telephone Claim Agent Workflow

Figure 2-6. "Process Flow with Root Cause Analysis Example" *Business Analysis for Practitioners: A Practice Guide*, Project Management Institute, Inc., 2015, Page 24
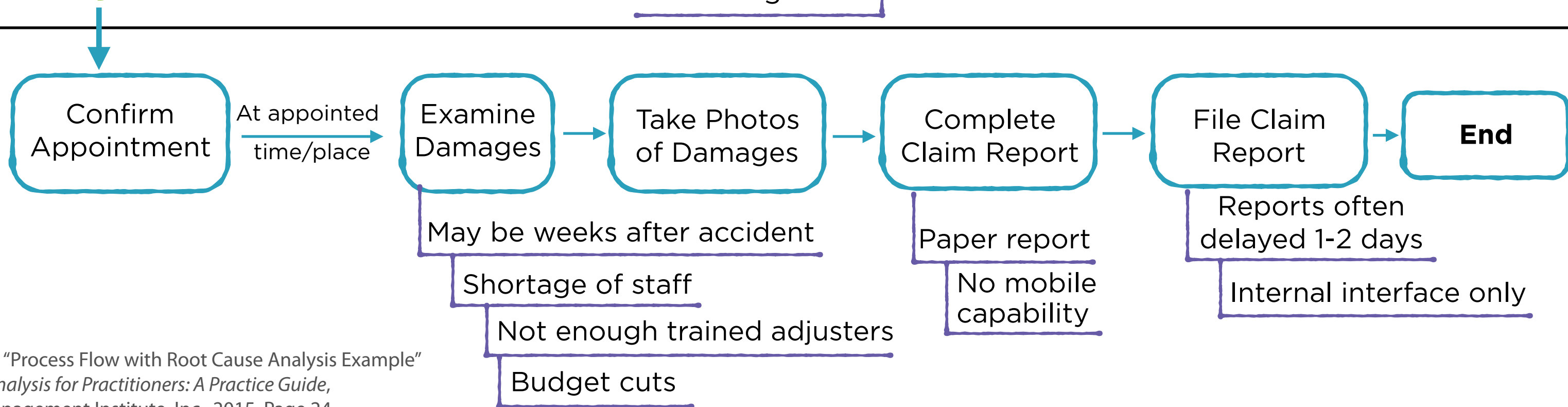
Telephone Claim Agent

Start → Receive Call → Determine Claim Eligibility → Record Accident Details → Find Open Times for Claims Adjusters → Schedule Match?

Receive Call:
- Calls wait/give up
- Limited agents
- Budget cuts

Record Accident Details:
- Internal Interface Only

Schedule Match? — Yes → Schedule Appointment for Examination → A

Schedule Match? — No → Continue Search?

Continue Search? — Yes → Find Open Times for Claims Adjusters
- Hard to find available times
- Limited adjusters
- Budget cuts

Continue Search? — No → Save Claim → End

A → Exam Appt.

Claim Adjuster

Exam Appt. → Confirm Appointment → (At appointed time/place) → Examine Damages → Take Photos of Damages → Complete Claim Report → File Claim Report → End

Examine Damages:
- May be weeks after accident
- Shortage of staff
- Not enough trained adjusters
- Budget cuts

Complete Claim Report:
- Paper report
- No mobile capability

File Claim Report:
- Reports often delayed 1-2 days
- Internal interface only

Figure 2-6. "Process Flow with Root Cause Analysis Example"
Business Analysis for Practitioners: A Practice Guide,
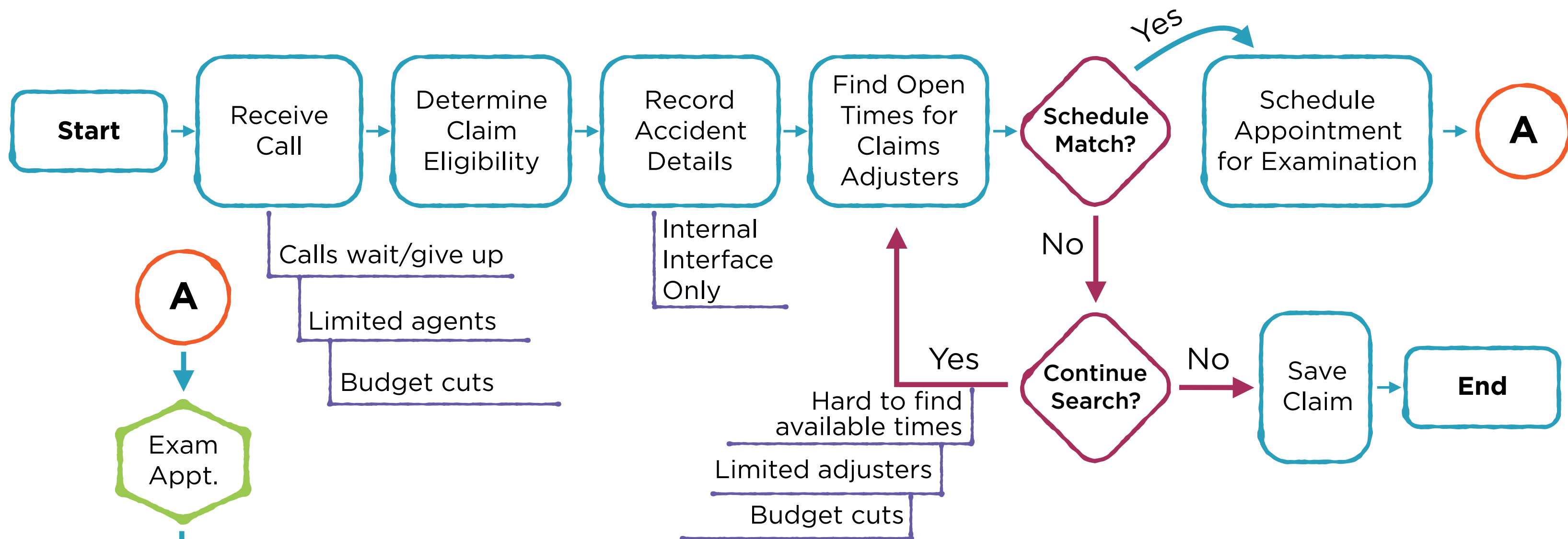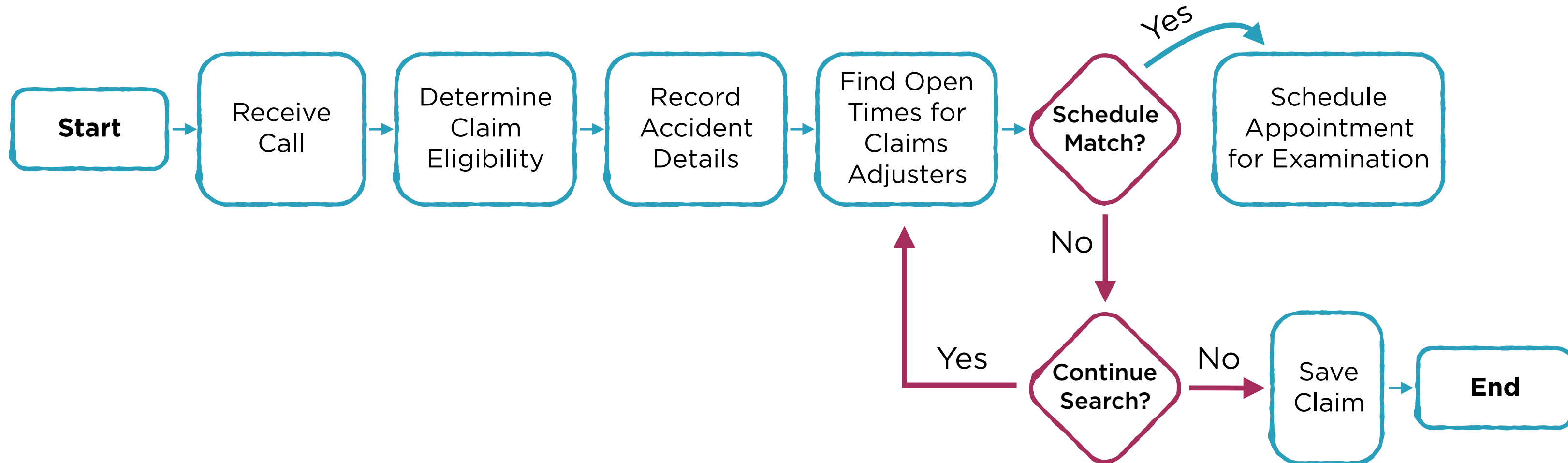Project Management Institute, Inc., 2015, Page 24

Telephone Claim Agent Workflow – Isolated

Start → Receive Call → Determine Claim Eligibility → Record Accident Details → Find Open Times for Claims Adjusters → Schedule Match?

Schedule Match? —Yes→ Schedule Appointment for Examination

Schedule Match? —No→ Continue Search?

Continue Search? —Yes→ Find Open Times for Claims Adjusters

Continue Search? —No→ Save Claim → End

Types of Models

Scope Models

Used to organize thoughts on feature sets, functional capabilities, and scope of work

Primarily focused on higher-level generation and understanding of requirements

Scope Models

Goal & Business Objective Models
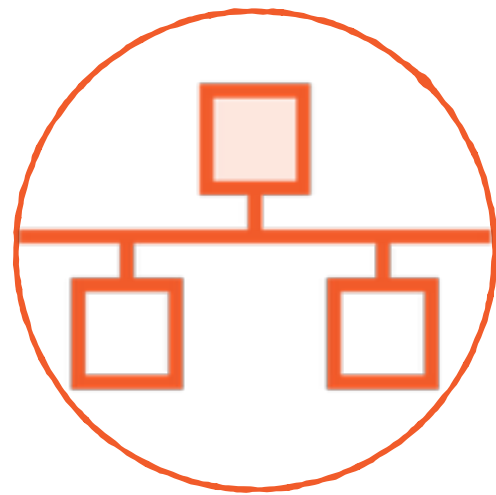
Ecosystem Maps

Context Diagrams

Feature Models

Use Case Diagrams
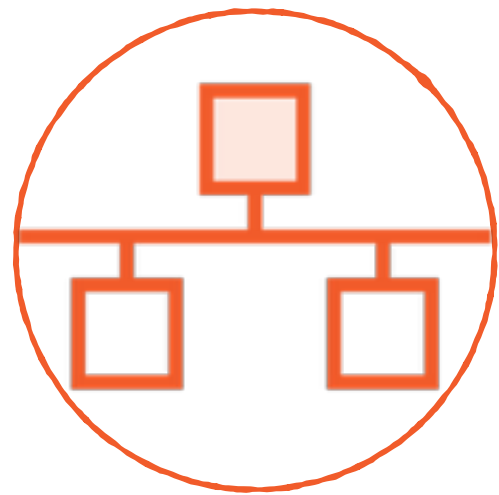
Process Models

Focused on how processes complete work and meet objectives

Analyzes how stakeholders interact with, impact, and are impacted by, processes

Process Models

Process flows

Use cases

User stories

Rule Models

Focused on ensuring business policies are adhered to by defining and limiting acceptable actions

Rules may be internal, contractual, regulatory, legal, etc.

Rule Models

Business rules catalogs

Decision trees

Decision tables

Data Models

Determines how, when, and where data is obtained

Outlines how data is used in systems and processes

Data Models

Entity relationship diagrams

Data flow diagrams

Data dictionaries

State tables

State diagrams

Interface Models

Focused on making specific systems more comprehensible and relevant

Addresses how systems are integrated and how they contribute to objectives

Interface Models

Report tables

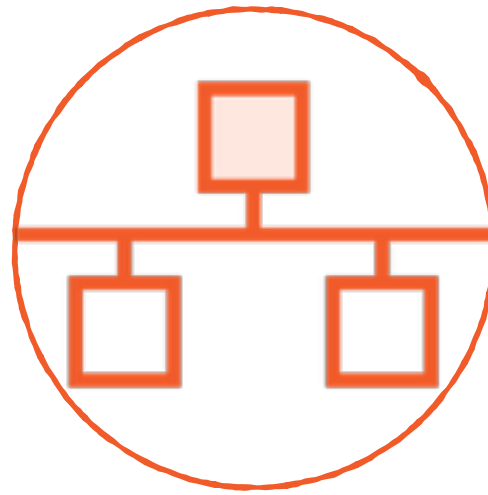System interface tables

User interface flows

Wireframes

Display-action-response models

Choosing Effective Models

Scope Models

Process Models

Rule Models

Data Models

Interface Models

Choosing Effective Models

Not all models always useful

Typically, several models may be valuable

Time, cost constraints may require choices to be made

Wise model selection increases both efficiency and effectiveness of analysis

Choosing Effective Models

Model Attributes

How many models should be used?

What time/resources should be committed to model development and analysis?

What level of formality is appropriate?

What level of depth is most effective?

Choosing Effective Models

Methodology

Agile or waterfall?

User stories → Agile

Use cases → Waterfall

Choosing Effective Models

Project Attributes

Degree of Automation

Level of Customization

Workflow/Process Characteristics

Technical Considerations

Analytics and Reporting

Scope of Project

Choosing Effective Models

Context of Time

Broad models may be helpful early on

Specific and more data-intensive models may be better later on

Choosing Effective Models

Specificity/Abstraction

Subject scope, level of desired detail impacts model selection

Some models best applied to whole solution; others to a portion's details

Choosing Effective Models

Consider models from each category

Question whether changes or new models may be beneficial as work progresses

Models often complement one another

New models can often leverage work done in developing earlier models

Choosing Effective Models

Checking models against one another useful in identifying…

Gaps in information

Extraneous details

Missing requirements

The Language of Modeling

The Language of Modeling

Shorthand, symbols, standardized notation methods all common in modeling

Specific languages used vary by organization and project

Consistency is key, regardless of language

Develop definitions and use shapes and colors in commonly understood ways

The Language of Modeling

Strive for simplicity in modeling

Follow any internal standards that exist

If internal standards are lacking, consider universal standards before developing new ones from scratch

Document language and symbology used, especially if it is unique in nature

Modeling Languages and Usage

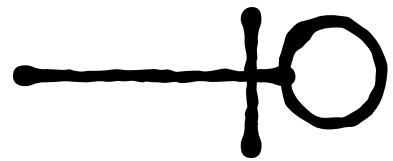| Modeling Language	Overview of Usage
Business Process Modeling Notation (BPMN)	Used to model complex business processes for the purpose of making changes to these processes.
Requirements Modeling Language (RML)	Used to visually model requirements for easy consumption by all stakeholders, particularly business stakeholders.
System Modeling Language (SML)	Used to analyze complex systems and includes a subset of UML.
Unified Modeling Language (UML)	Primarily used to specify design models but can work well to specify requirements
Various Other Modeling Languages	Used when a specific modeling language isn't appropriate or not part of the organizational standards. For example, process models are frequently created using ISO-standard flowchart symbols. Data models often use Information Engineering "crow's foot" notation.

Common Flowchart Shapes

Starting Point

Decision

Process

Document

Data

Connector

Crow's Foot Notation

A
B

One to One
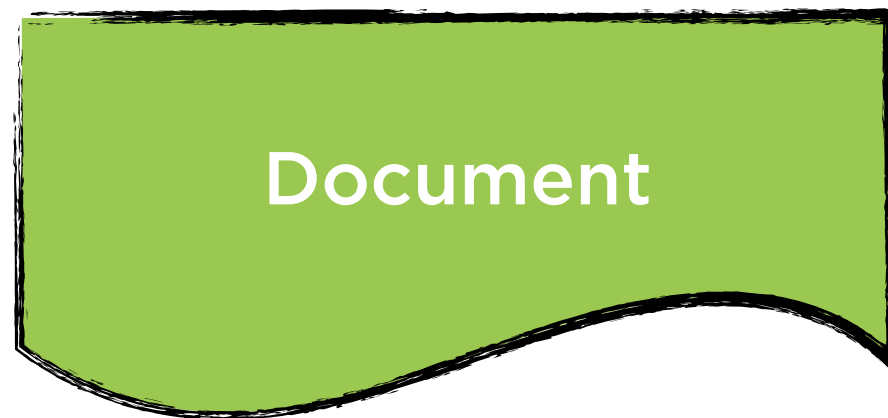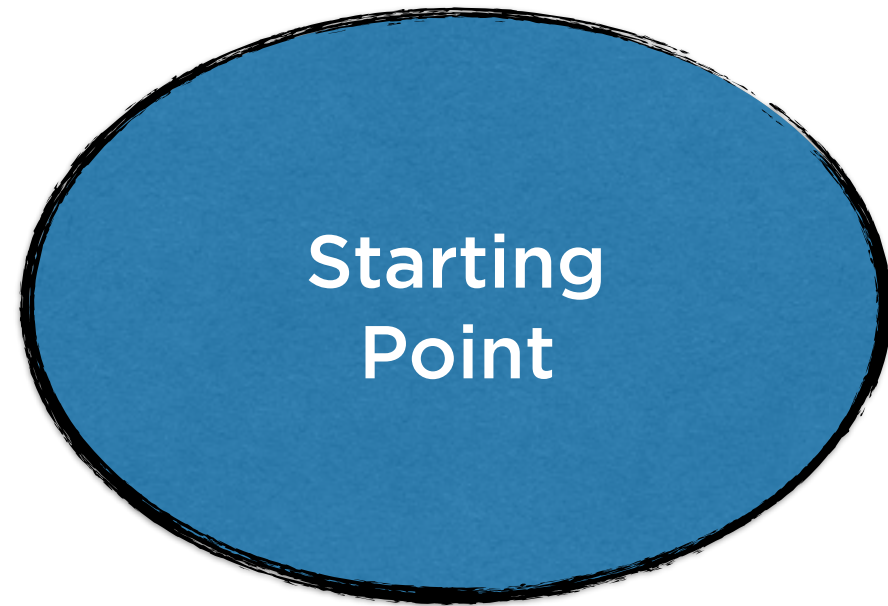
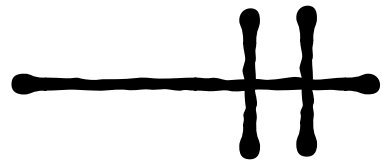# Crow's Foot Notation

Musician — Plays — **Song**

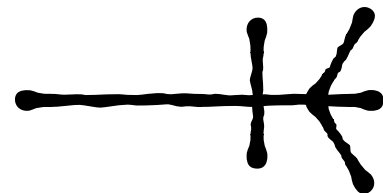*One musician plays one song*
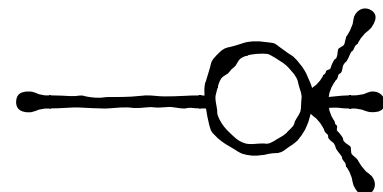
Crow's Foot Notation

Zero or one

One and only one

One or more

Zero, one or more

May be applied to both sides of relationships

Zero may also mean optional

Useful in modeling relationships

Crow's Foot Notation

Musician — Plays — **Song**

One or more musicians play one song

Crow's Foot Notation

Musician ⊣ Plays ○— **Song**

One or more musicians play no songs

Crow's Foot Notation

Musician ———< **Plays** >——— **Song**

One or more musicians play one or more songs

Takeaways

THE PURPOSE OF MODELS

Help make information captured during elicitation easier to understand, use, and communicate to others

Provide context, highlights connections

Shows where knowledge gaps may exist and where unneeded detail can be cut

Takeaways

TYPES OF MODELS

Scope models represent features, capabilities, and scope of work

Process models focus on how work is completed and objectives are met

Rule models ensure business policies, regulations, and laws are followed

Data models determine how, when, and where data is obtained and used

Interface models focus on the relevance, usefulness, and integration of systems

Takeaways

CHOOSING EFFECTIVE MODELS

Consider model usage, resources, appropriate formality, useful level of detail

Methodology may result in certain models being preferred

Project attributes determine what areas of analysis may benefit most from models

Takeaways

CHOOSING EFFECTIVE MODELS

Timing may impact the value and development of models

Level of detail required may impact model selection

Takeaways

THE LANGUAGE OF MODELING

Organizations often have standards in place

Common understanding is critical

Simplicity leads to better comprehension

Rely on standardized languages and symbols when organizational standards are inadequate or do not exist