

# Agile Capitalization

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## Agenda



- Introductions
- GAAP Principles
- Capitalizing Software
- Waterfall vs Agile Development
- Classification Rules
- Collect, Classify, Report
- Converting your Company

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## Introductions



With peers

- Your name, role, goals for workshop
- Level of Agile experience? Type (Scrum, etc)
- Existing challenges?
- Corporate policies on dev classification? Minimums? Whose work counts?
- Does the same team build single-client features, and features for many clients?

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## GAAP Principles



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## Why society capitalizes



- We want citizens to build buildings, software, machines, etc.
  - They cost lots of money up front
  - They earn money over time
- Shareholders care about long-term profit

### Conclusion:

- Spread investment's cost over its useful life

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## Why companies capitalize



- Reduce future tax liability
  - Tax law is asymmetric for losses and gains
- Stabilize P&L statements
- Hire more asset developers
- Stabilize employment for asset developers
- Create happier auditors and stakeholders
- (story points) Stop tracking actual hours

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## GAAP Principles



- The Conservatism Principle
- The Objectivity Principle
- The Matching Principle
- The Consistency Principle
- The Materiality Principle

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## GAAP: Conservatism



- Accounting for a business should be fair and reasonable. Accountants make evaluations and estimates, deliver opinions, and select procedures. They should **neither overstate nor understate the affairs of the business or the results of operation.**

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## GAAP: Objectivity



- Records must be based on objective evidence. Objective evidence means different people looking at the evidence will arrive at the same values for the transaction shown in reports.
- **The source document for a transaction is almost always the best objective evidence.**

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## GAAP: Matching



- Extends the revenue recognition convention. **Each expense related to revenue must be recorded in the same accounting period as the revenue it helped to earn.** If this is not done, the financial statements will not measure the results of operations fairly.

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## GAAP: Consistency



- Accountants should apply the same methods from period to period. **When methods change, financial statements must clearly explain the change.** Readers assume consistent reporting if there is no statement to the contrary.
- This principle prevents people manipulating financial statements by changing methods.

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## GAAP: Materiality



- Accountants must **use generally accepted accounting principles except where it would be expensive or difficult**, and where it makes no real difference if the rules are ignored. If a rule is temporarily ignored, the reported net income must not be significantly affected and the reader's ability to judge the financial statements must not be impaired.

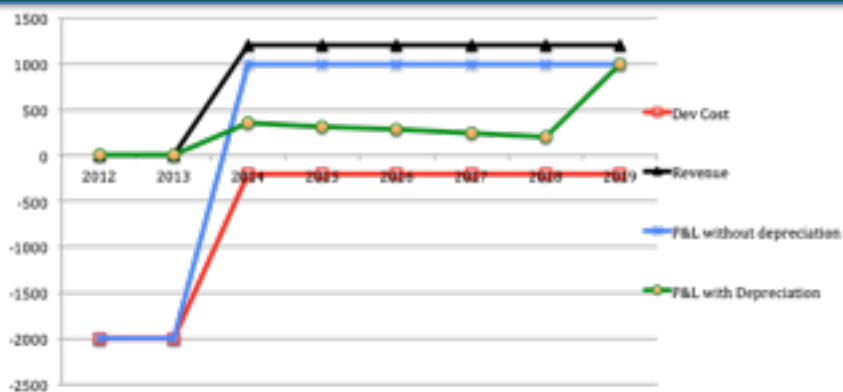
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# Capitalization



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## P&L with/without depreciation



### Expensing asset development

- Violates the GAAP Matching Principle
- Results in additional tax liabilities (loss carry-forward limits)
- Confuses shareholders with choppy P&L statements

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## What can be capitalized?



To be depreciable (capitalized), property must meet all the following requirements.

- It must be property you own.
- It must be used in your business or income-producing activity.
- It must have a determinable useful life.
- It must have a useful life that extends substantially beyond the year you place it in service.

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## Software is Capital Investment



- **Internal software**
  - Automating work saves money year after year
- **External software**
  - Software can be sold year after year
- **Tax authorities and shareholders want**
  - Represent the truth about investments (Objectivity)
  - Spread investment cost over its lifetime (Matching)
  - Approximation over miscategorization (Materiality)

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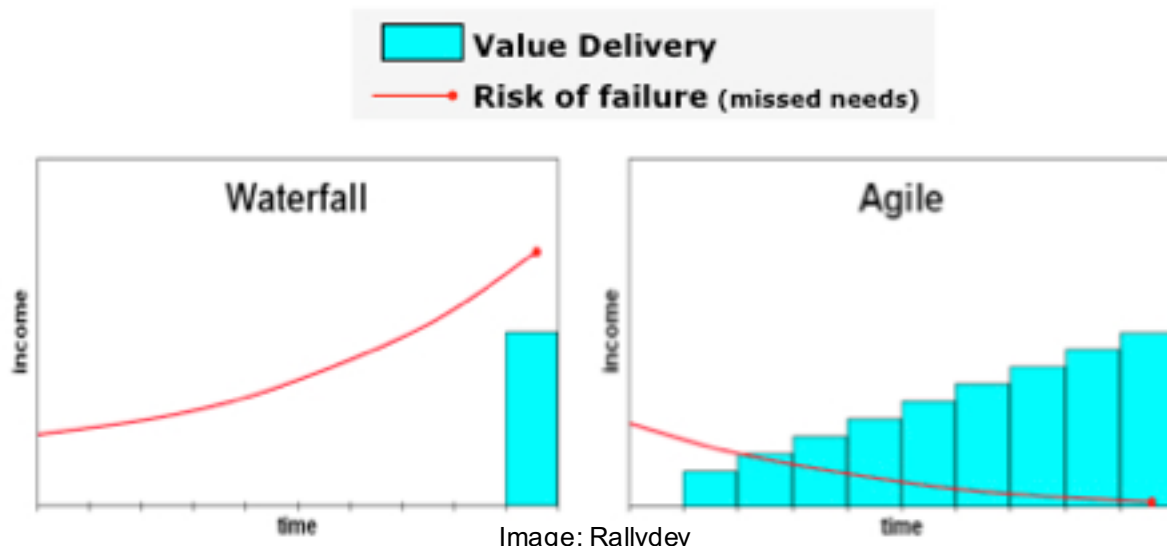
## Life of a software investment



- Analysis
- Prototyping, Feasibility Testing
- Capitalization
- Depreciation
- Maintenance
- Impairment (book value vs fair market)
  - Agile and Lean Startup experiments can prevent this

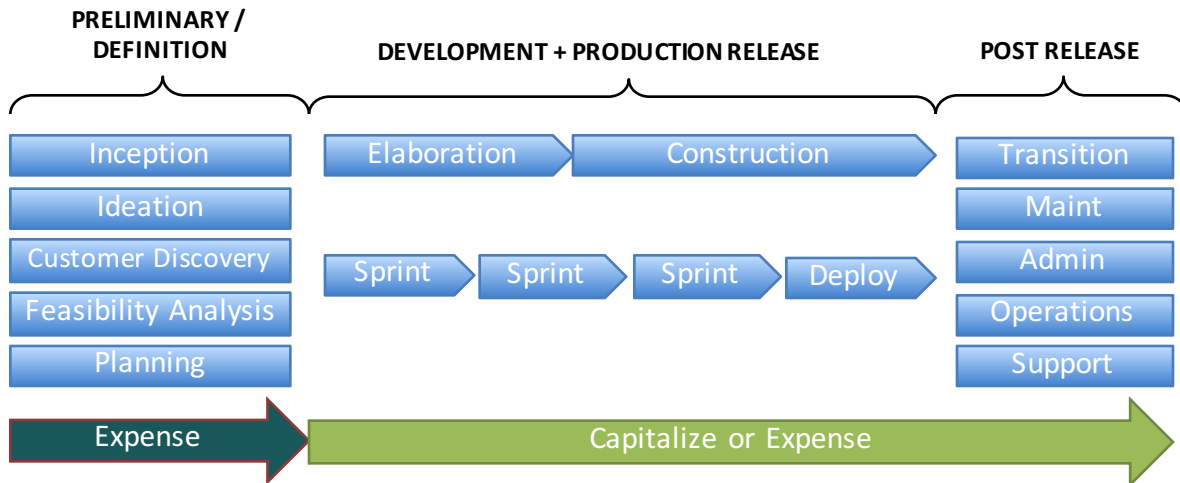
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## Lower risk, greater value, harder



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# Software Development Lifecycle



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# Classification Rules



- Review FASB ASC 350-40 or ASC 985-20
- Review Citrix approach
- Agree: Finance, Engineering, Execs
- Verifiability (“Objectivity Principle”)

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## Technical Feasibility/Prototype



Is a feature technically feasible?

- If uncertain, labor is not capitalizable

*However*

- Virtually all features are technically feasible

Why this rule? To avoid frequent impairments.

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## Whose work can be capitalized?



- Developers
- Quality Assurance
- Architects
- Product Management
- User Experience / Graphical Design

No:

- Administrative Management
- Training

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## Capital Assets: 1 of 2



- New products or features not previously seen
- The same functionality on a different platform
- New types of internal or external reports for a product, if it involves database schema changes or software development.
- Fixing a "non-regression bug"
- Changing the database schema and code interacting with the database to enable new functionality
- Internationalization (not localization)

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## Capital Assets: 2 of 2



- New User Interface (UI) or User Flows
- Preparing for new functionality development
  - Refactoring code
  - Adding automated regression testing
- Major API changes
- Porting software to a different OS or major revision if market expands.
- Operability improvements
- Development for fault-tolerance, disaster recovery, deployability and operability

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## Operational Expenses



- Customization for a client (?)
- Technology feasibility “spikes”
- Fixing regression bugs
- OS minor-version bugs (?)
- Localization(?)
- Operational costs
- Training costs
- Administrative activities
- Routine security reviews or upgrades

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## Collect, Categorize and Report



- Challenge: How to efficiently track work?
- 100% teams
- Story points versus tracking hours
- Simple, defensible data collection techniques that overlay or enhance your existing practices

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## Simplest (but expensive) Solution



- Designate different teams for asset or maintenance development
- Discuss: Any problems with this?

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## Story Points vs Tracking Hours



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## Tracking Hours



- **Default approach** to tracking labor
- May **force unneeded task breakdowns**
- **Slows productivity** via frequent interruption
- Weekly time tracking has **poor accuracy**
- **Higher overhead** in administration & tooling

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## Story Points



- Story Points are **correlated** with effort
- Scrum teams **continuously improve correlation** between estimated and actual
- Scrum practices and tooling **naturally capture data** for proportional allocation of labor
- Reports **easily traceable** to individual effort
- Satisfies GAAP objectivity property

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# Story Points Example



Team  
 - 1 PO  
 - 3 Dev  
 - 2 QA

Sprint  
 - 2 Week

RANK	ID	PLAN EST	NAME	DESCRIPTION	TAGS
<b>176.0 Points</b>					
1	DE1	5.00	Fix News on Safari	As a site member, I can see a news list on Safari (which used to work), so I don't have to install Chrome or Firefox.	opex
2	US9	5.00	Profile Fields	As a site member, I want to describe myself on my own page in a semi-structured way. That is, I can fill in predefined fields, but also have room for a free-text field or two. (It would be nice to let this free text be HTML or similar.)	cap
3	DE2	5.00	Fix Trainer application system on Safari	As a site member, I can use the Trainer application system on Safari (which never worked), so I don't have to install Chrome or Firefox.	cap
4	US10	8.00	Practitioner Application	As a site member, I can fill out an application to become a Practitioner.	cap
5	US11	13.00	Site Internationalized	As a systems administrator, I can add a new language by uploading locale-specific strings into the database, so we can support new non-English speaking markets.	cap
6	US12	13.00	PMI Trainer Application	As a site member, I can fill out an application to become a Trainer on PMI site (PMI commissioned).	opex
7	US109	13.00	Site Localized for Mexico	As a Spanish speaker in Mexico, I can use the site without needing English, so the company can more effectively sell its products in Mexico.	
8	US13	5.00	Trainer Color	As a Trainer, I want my profile page to include additional details about me (i.e., some of the answers to my Trainer application).	cap

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# Expense Defect



DE1: Fix News on Safari

DEFECT STATE: Submitted | SCHEDULE STATE: D | STATUS: [Icons] | PLAN EST: [ ] | TASK EST: 0 | TO DO: 0

DESCRIPTION: As a site member, I can see a news list of Safari (which used to work) so I don't have to install Chrome or Firefox.

DEFECT ENVIRONMENT: No Entry | PRIORITY: No Entry

TAGS: opex x

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# Capitalizable Defect



DE2: Fix Trainer application system on Safari

DEFECT STATE: Submitted | SCHEDULE STATE: D | STATUS: [checked] | PLAN EST: 0 | TASK EST: 0 | TO DO: 0

DESCRIPTION

As a site member, I can use the Trainer application system on Safari (which never worked), so I don't have to install Chrome or Firefox.

DEFECT

ENVIRONMENT: No Entry | PRIORITY: No Entry

TAGS: add cap

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# Convert Your Company



- Executive Sponsorship
- Collect existing process guidance and data
- Propose a rough approach
- Team up
- Run a quarter
- Decide for the future

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## Executive Sponsorship



- Identify executives that benefit
  - Engineering VPs may get higher headcount
  - Finance VPs will likely get more stable P&L
  - Fewer boom-bust hiring/firing cycles
- Get your boss to agree to support your work
  - You may spend 50% time for 2 months exploring
- See if your CFO is willing to explore the idea
  - Needn't be a cheerleader, but must be curious
  - May be a material change: blame agile

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## Assemble Existing Processes, Data



- Current classification guidance
- Number of corrections in typical audits
- Past impairments, if any
- Accountable, responsible staff members
- Verifiability: When do we guesstimate?
  - By engineer in filling out time sheets?
  - By project manager in estimating work?
  - If auditor asks 12 mons later, will answer be same?

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## Propose Revisions



- Start with GAAP, then FASB: justify with law
- How will agile capitalization differ?
- Costs, benefits?
- What staff will be involved and how?
  - Limit impact on finance group
- Incorporate classification into Ready & Done
- Write it up clearly and give to CFO, finance

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## Team with stakeholders, auditors



- Identify stakeholders, representatives
- Plan how to notify shareholders
- Run one quarter with old and new processes

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## Finish a Quarter



- Compute with new and old processes
- Revise process description and classification guidance
- Send guidance to auditors
- Coach CTO, CFO, finance, project mgmt
- Meet with auditors to finalize
  
- CFO: Announce change to shareholders

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## Help if you Want It



### Senex Rex team

- Bulletproof fundamentals and understanding  
Technology, Finance, Business
- Published agile capitalization case study
- Strong references

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## Issues We'd Like Resolved

- Expand this work to non-US situations
- Case studies from other companies
- Help finance departments use agile methods



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