

# How to Achieve User Experience Excellence in Software Products

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# About Bill

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- ✦ "First" employee of Apple Computer.
- ✦ Past programmer, electronic engineer and technician.
- ✦ Total 30 years developing hardware and software.
- ✦ Last 20 years designing user interfaces.
- ✦ Last 10 years as a UX Consultant.



# Agenda

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- ✦ Define the problem.
- ✦ Define the goal.
- ✦ The six organizational pillars.
- ✦ A UX-savvy development process.

Abbreviations:

UI = User Interface

UX = User Experience



# Defining the Problem

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# Assumptions About You

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- ✦ You develop software products.
- ✦ User experience excellence is key to your success.
- ✦ You want to learn how to achieve this excellence.
- ✦ Maybe you've already tried and failed.



# What You Want

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- ✦ Happy customers.
- ✦ A profitable business.
- ✦ A sane workload.
- ✦ Pride in your accomplishments.



# A Common Misconception

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- ✦ An excellent user experience can be produced by following:
  - ✦ UI Standards
  - ✦ UX Guidelines
  - ✦ Books by gurus
  - ✦ Etc.



# The Reality

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- ✦ You can only codify the mechanics of UX, not its "logic" nor its "soul".
- ✦ You can have a common look and feel and still have lousy products.
- ✦ It takes special expertise to produce good user experiences.



# Good Examples of Bad UI

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Demonstrating that UI standards are not enough.



# "Yes" or "No" — Confusing

Do you want to save your changes?

Yes

No

Do you want to discard your changes?

Yes

No

Do you want to erase your hard drive?

Yes

No

Windows must be activated within 3 days. Do you want to activate Windows now?

Yes

No



# "Yes" or "No" — Improved

You have unsaved changes.

Save

Discard

Cancel

About to erase hard drive.

Erase Hard Drive

Cancel

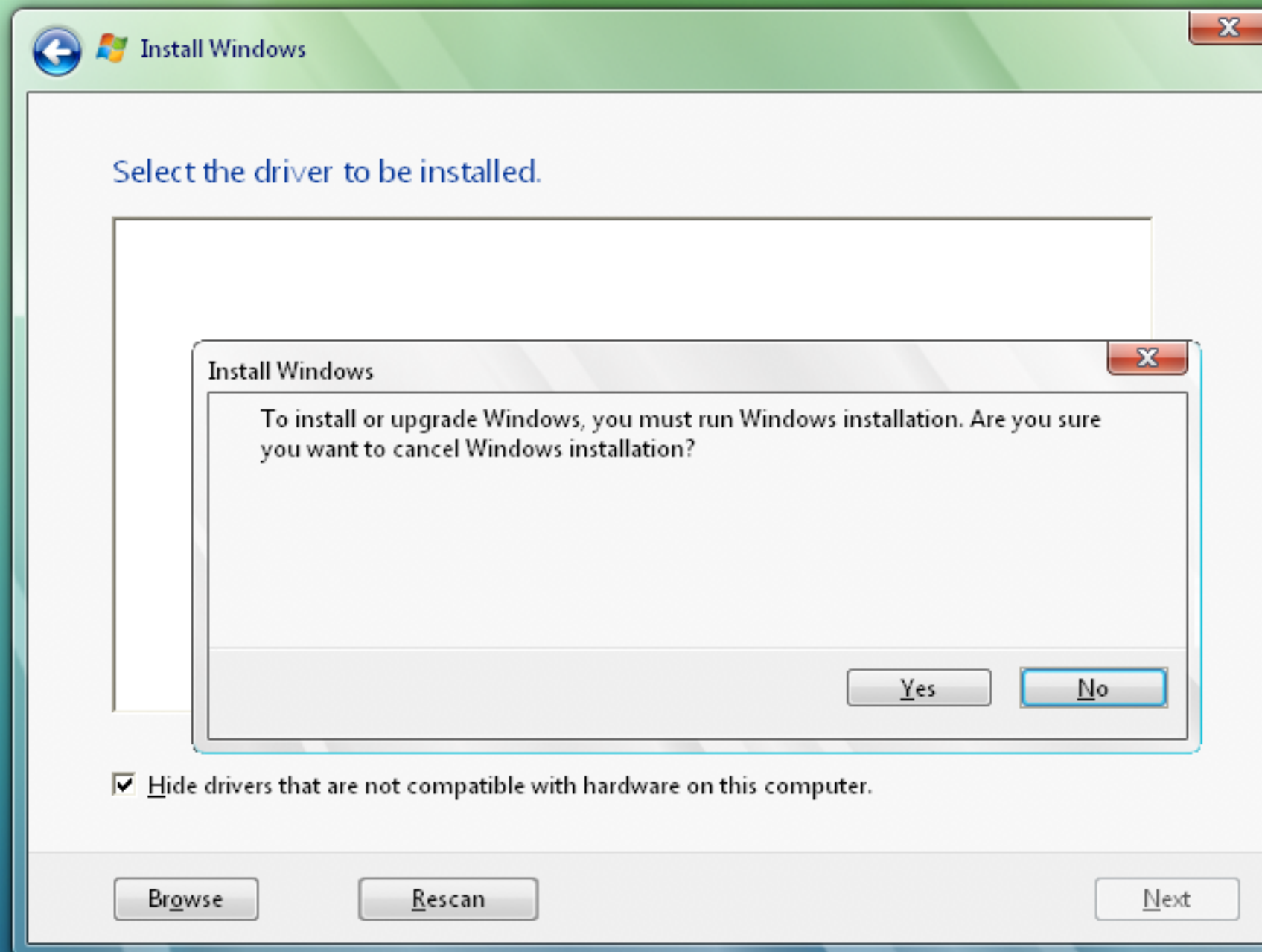
Windows must be activated within 3 days

Activate Now

Activate Later

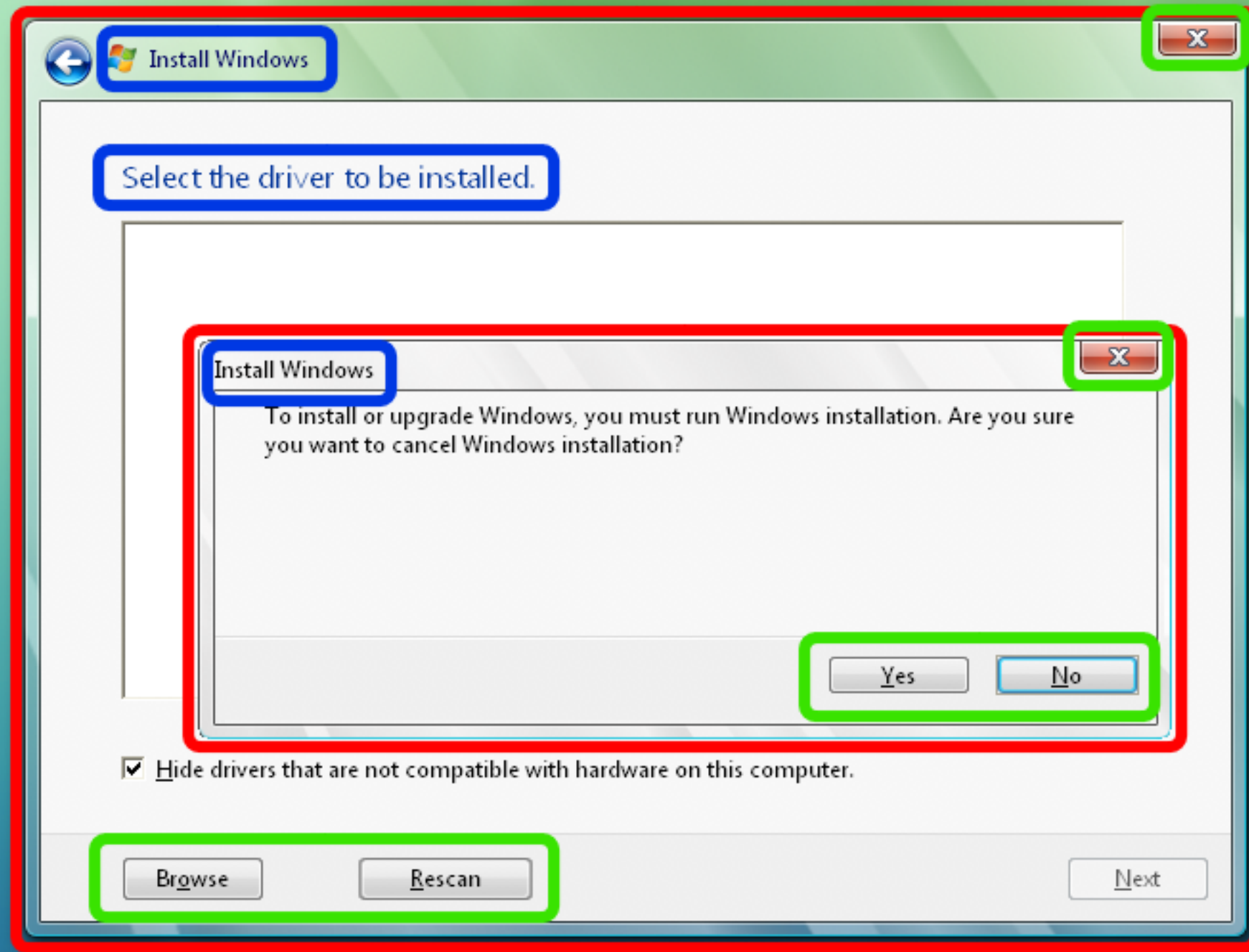


# Windows Vista Installer 1 of 4



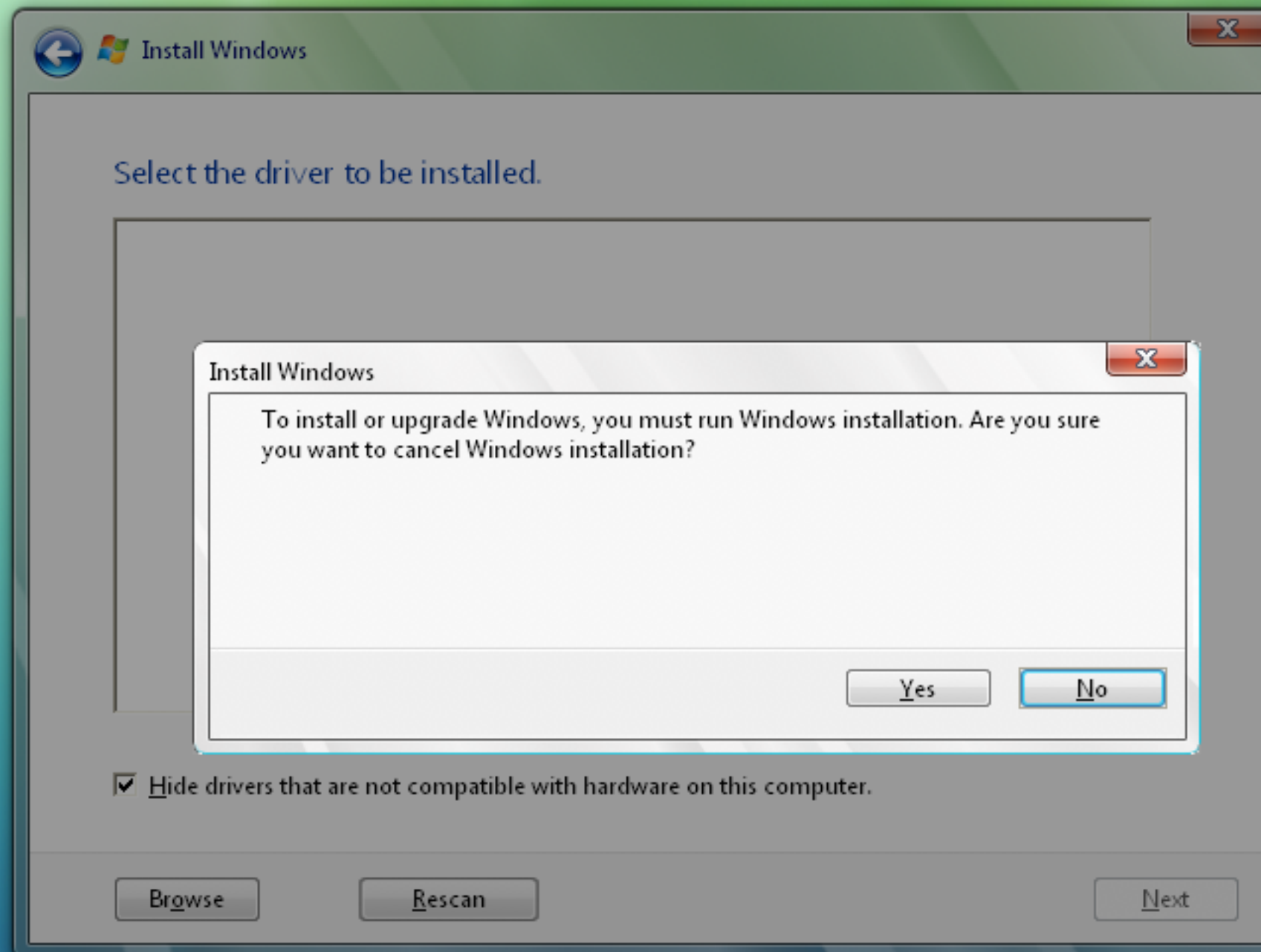


# Windows Vista Installer 2 of 4



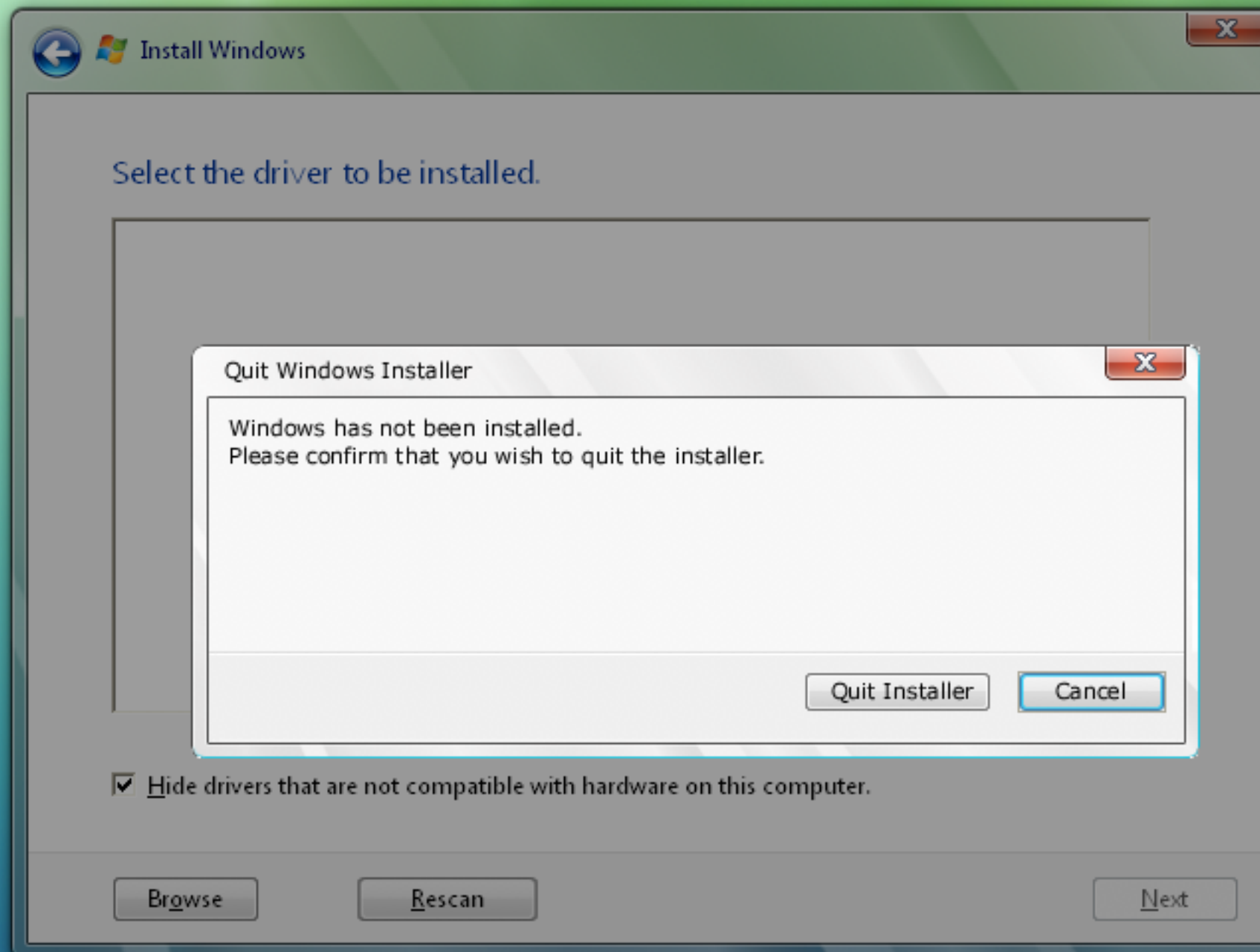


# Windows Vista Installer 3 of 4





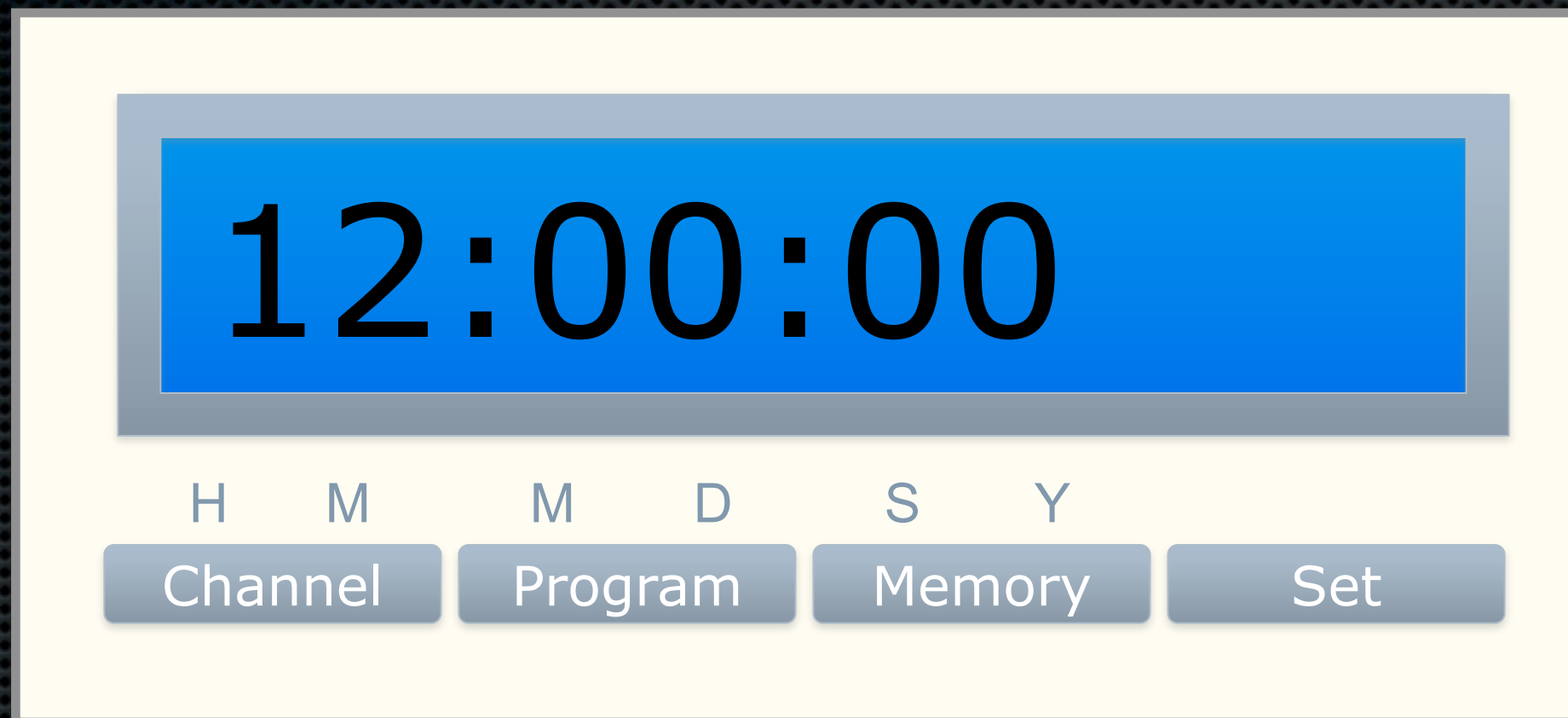
# Windows Vista Installer 4 of 4





# The Controls on my DVD Player

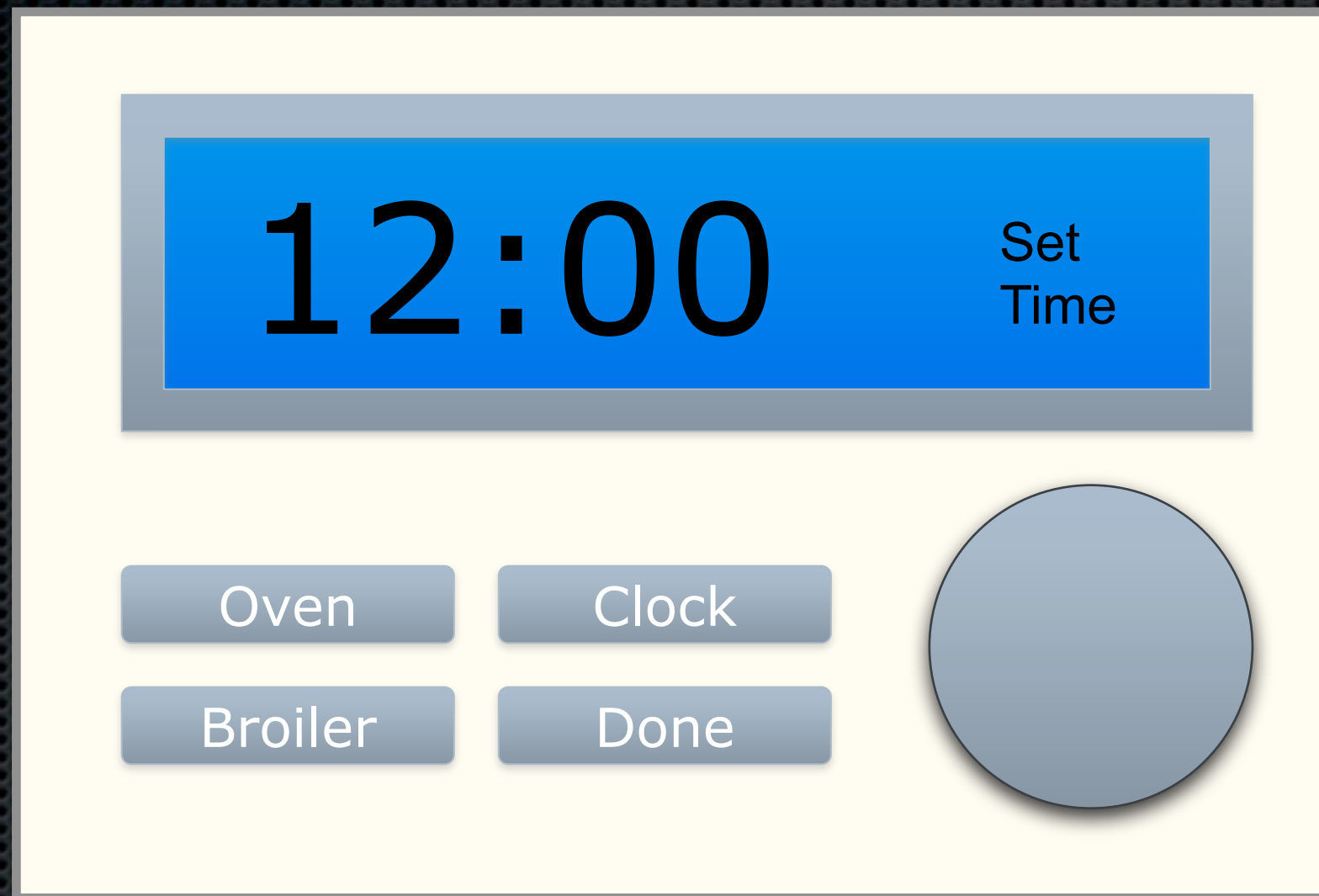
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# The Controls on my Oven

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# Brain Break

(touch shoulders, touch thighs)



# The Goal of User Experience



# The Goal is Empowerment

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- ✦ The goal is to empower users.
- ✦ There are ten elements of empowerment.
- ✦ Let's review them...



# The Elements of Empowerment

<b>Useful</b>	enables you to do something needful.
<b>Complete</b>	must do all that is needed.
<b>Efficient</b>	lower "personal cost" than other approaches.
<b>Powerful</b>	small effort yields big results. Little minds solve big problems.
<b>Usable</b>	understandable, learnable, memorable, "intuitive".
<b>Responsive</b>	who's in charge: the user or the computer?
<b>Reliable</b>	it's of no use if it can't be counted on.
<b>Attractive</b>	aesthetics have a powerful, non-trivial impact.
<b>Effective</b>	you get the results you need.
<b>Satisfying</b>	for the results you get, you're happy to pay the cost.



# The Elements of Empowerment

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**Complete** must do all that is needed.

**Efficient** lower "personal cost" than other approaches.

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# The Elements of Empowerment

- ✦ Useful
- ✦ Complete
- ✦ Efficient
- ✦ Powerful
- ✦ Usable
- ✦ Responsive
- ✦ Reliable
- ✦ Attractive
- ✦ Effective
- ✦ Satisfying



# Brain Break

(touch-nose & grasp-ears)



# The Six Organizational Pillars of UX Success

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# Mindset (1 of 6)

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At all levels of the organization:

- ✦ Our goal is end-user empowerment.
- ✦ Excellence in all things.
- ✦ Internal cooperation and collaboration.
- ✦ We will learn and grow as we go.
- ✦ We will get it right before we ship.



# Expert UX Expertise (2 of 6)

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- ✦ Every specialty has it's own UX expertise needs:
  - ✦ Designers.
  - ✦ Implementors.
  - ✦ Testers.
  - ✦ Instructors.
  - ✦ Managers.
  - ✦ Executives.



# Development Process (3 of 6)

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- ✦ User-experience friendly.
- ✦ With the UX elements you need.
- ✦ With time and costs budgeted for the UX work.



# Shining Examples (4 of 6)

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- ✦ People learn by example.
- ✦ Your team needs examples of what to shoot for.
- ✦ Choose inspirational examples.
- ✦ Copy the best.
- ✦ Develop your own canonical examples.



# UI Code Libraries (5 of 6)

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- ✦ Codify best practices.
- ✦ Prevent mistakes.
- ✦ Speed development.
- ✦ Free developers to innovate where needed.
- ✦ Enable adaptability over time.



# UX Guidelines (6 of 6)

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- ✦ A basis for independent decision-making.
- ✦ Guidance more than dictates:
  - ✦ Philosophy.
  - ✦ Principles.
  - ✦ Best Practices.
  - ✦ Policies.



# The Six Organizational Pillars of UX Success

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- ✦ Mindset.
- ✦ Expertise.
- ✦ Process.
- ✦ Examples.
- ✦ Code libraries.
- ✦ Guidelines.



# Brain Break

(cross bob & wiggle)



# The Development Process

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# UX Development Process

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- ✦ Ten phases.
- ✦ Presented in the order they're usually added.
- ✦ Highlighting UX activities appropriate for each phase.



# Development Process 1 of 9

- Design & validate the design

- Implement

- Deploy

## UX DESIGN

- Conceptual design.
- User interface architecture design.
- Information architecture design.
- Interaction design.
- Visual design.

## UX VALIDATION

- Concept review with stakeholders.
- Usability testing with paper prototypes or interactive mockups.



# Development Process 2 of 9

- Design
- Implement & test function, stress, usability, etc.

- Deploy

- General usability testing.
- Error rates.
- Productivity.
- Learnability.
- Learning retention.
- Satisfaction.



# Development Process 3 of 9

- Design
- Implement
- **Deploy** & anticipate, train, advertise, etc.

- The deployment is part of the UX.
- Users will pre-judge your app based on the rollout experience.
- Anticipate obstacles.
- Smooth the path.



# Development Process 4 of 9

- Design
- Implement
- **Document & have all the answers prepared**

- Deploy

- Documentation and the help system are part of the UX.
- Usability testing of documentation and help system.



# Development Process 5 of 9

## • Research & understand the results

- |             |  |
|-------------|--|
| • Design    | • Task analysis.   |
| • Implement | • User Studies.  |
| • Document  | • Contextual Inquiry.  |
| • Deploy    | • Content analysis.  |
|             | • Card sorting.  |
|             | • Affinity grouping.   |
|             | • Personas.  |
|             | • Scenarios.   |
|             | • Use cases.   |
|             | • <u>Why</u> certain functions are requested is often more important than <u>what</u> functions are requested. |



# Development Process 6 of 9

- Research
- Design
- Implement
- Document
- Deploy
- **Support & learn reactively**

- Support is part of the UX.
- Build feedback submission into each app.



# Development Process 7 of 9

- Research
- Design
- Implement
- Document
- Deploy
- Support

- **Monitor**

**& learn proactively**

- Keep your ear to the ground.
- Examine your usage and error logs.



# Development Process 8 of 9

## • Measure & save as benchmark

- Research

- Design

- Implement

- Document

- Deploy

- Support

- Monitor

- Document the initial state.
- Interviews.
- Polls.
- Productivity measures.
- Support loads.

## • Measure & compare

- Compare before and after results.
- Make defensible improvement claims.



# Development Process 9 of 9

- Measure
- Research
- Design
- Implement
- Document
- Deploy
- Support
- Monitor
- Measure

- Don't let your experience go to waste.
- Sharpen your saw before each new project.

- **Review** & roll lessons-learned into next project



# Development Process

- ✦ Pre-Measure
- ✦ Research
- ✦ Design
- ✦ Implement
- ✦ Document
- ✦ Deploy
- ✦ Support
- ✦ Monitor
- ✦ Post-Measure
- ✦ Review



# Brain Break

(choir director: figure 8's with both hands)



# Closing Remarks

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# Act → Learn → Grow

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- ✦ Choose your goals.
- ✦ Think ahead.
- ✦ Make a plan.
- ✦ Follow the plan.
- ✦ Adapt to changing conditions.



# Act → **Learn** → Grow

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- ✦ Observe and measure.
- ✦ Review and contemplate.
- ✦ Analyze and consult.
- ✦ Expand your minds.



# Act → Learn → **Grow**

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- ✦ Practice.
- ✦ Strengthen.
- ✦ Extend.



# Relish the Results

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- ✦ Happy customers.
- ✦ Successful business.
- ✦ Enviably reputation.
- ✦ Job satisfaction.

The End

You can get your own copy of these slides at:

<http://billfernandez.com/bfd2/hobbies/index.htm>