# Virtual City Slideshow
## and
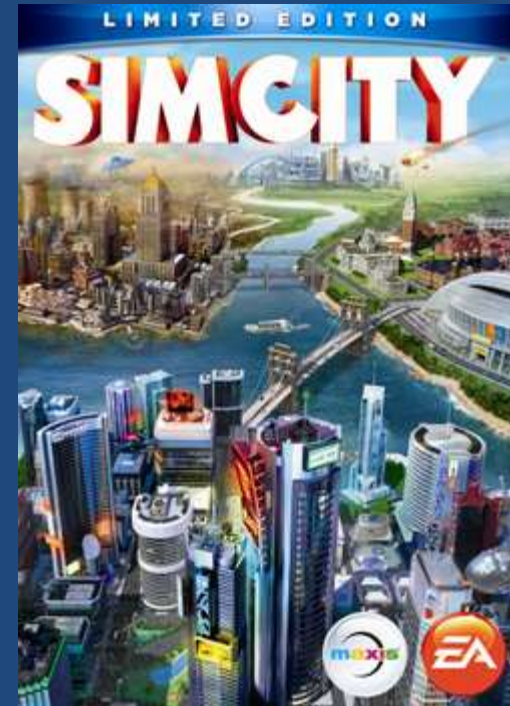# Getting Started with SimCity

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# Agenda

- Understanding the Virtual City exercise
  - Learning objectives
  - Rules
  - Background information
- SimCity and Origin
  - Downloading SimCity
  - Using "Offline" mode
- Virtual City slideshow deliverable
  - Tips, suggestions, how-tos

# FYI - SimCity how-tos

- This presentation will not cover SimCity how-tos

- Where to learn more on SimCity
  - NTX Team Center resources page
    - SimCity tips for success (pdf doc)
    - Virtual City tutorial recording 2015 (skip the first 17 minutes)
    - SimCity tutorial recording 2014

# Understanding the Virtual City Exercise

Before You Play

# Virtual City deliverable

- Virtual City slide show
  - Documents (with screenshots and benchmarks) city growth and progress at *2* stages
  - Records your assessment of progress at each stage
  - Outlines your plans to respond to results of the simulation-test to improve city progress
  - Concludes with reflection on lessons learned and how they will be applied to the rest of the FC project

# Virtual City exercise = Engineering Design Process

1. Plan basic city design
2. Input design into SimCity
3. Build up city
4. Test your decisions with SimCity
5. Change the design to make it work better
6. Test the changes

Engineering Design Process

Design – Test – Refine/Redesign
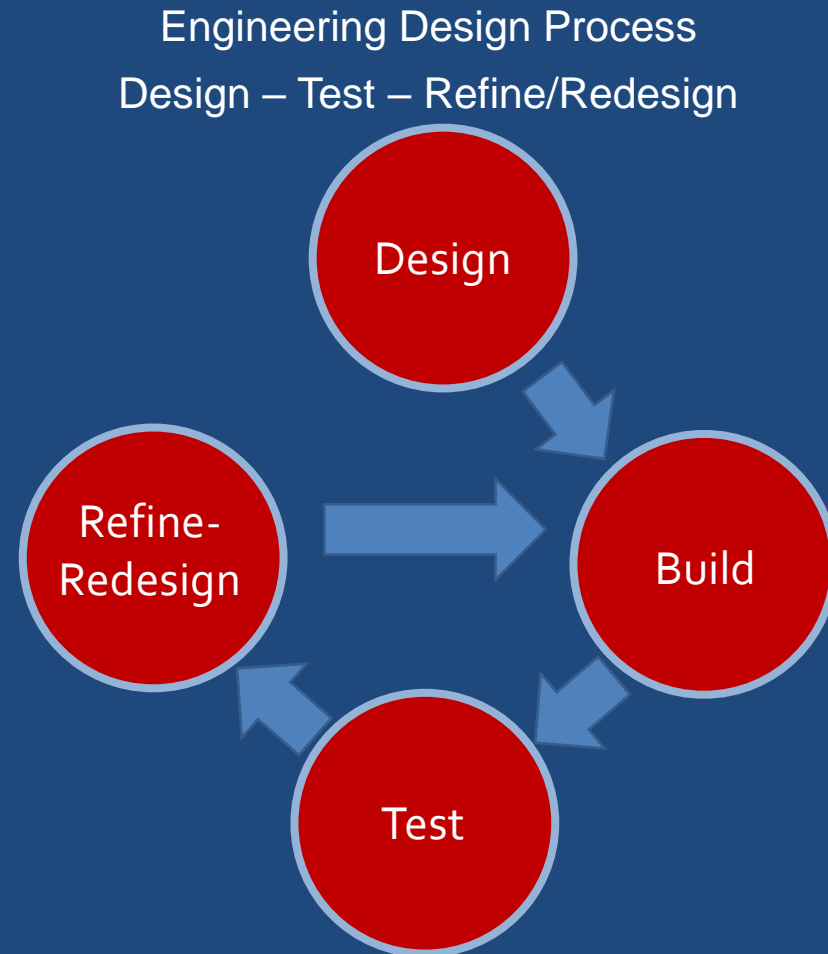
# Goal of the virtual city exercise

- Goal is to use and understand the Engineering Design Process

- Judges are NOT looking for the perfect city

- Judges want to see evidence that the team can:
  - Establish meaningful long-term goals
  - Develop a city design for achieving those goals
  - Use the simulation tool to test the design
  - Accurately assess progress based on simulation results
  - Refine the design as necessary to improve progress

# SimCity rules

- Cheats and gifts are discouraged
  - But *are allowed* (if absolutely necessary to keep the game going)
  - If used, it must be documented
  - If used, it indicates that problem exists and team should work to resolve it

- Sandbox mode is NOT allowed
- Use SimCity in offline (single-user) mode
  - Online is not disallowed, but if used, must be a Private game

# Slideshow Rules

- Follow slideshow template
  - No more than 23 slides
- Document progress at 2 points in time
  - 4 required screenshots
  - Benchmarks
  - Analysis of progress
  - Strategies for improving
- Develop conclusions
  - Lessons learned
- Submit slideshow as pdf file



3. Delete all tips before you submit for cleaner presentation.

25TH ANNIVERSARY

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COMPETITION

2016-2017 Virtual City Presentation

School/Organization: **Insert School/Organization Name**
Educator Name: **Insert Educator Name**
Future City Team Name: **Insert Future City Team Name**

# Slideshow Materials

- Download
  - Virtual City slide show Template (PowerPoint)
    - Powerpoint
    - Google Slide
    - Word
  - Benchmark worksheet
  - Sample Virtual City slide show
- Handbook
  - Sample city goals

# Note on sample materials

- Sample goals (p. 56 in handbook)
  - You are welcome to choose two of these sample goals and their associated measures (metrics)
  - Or, you may make your own goals
    - Goals must be significant, challenging and measurable

- Sample slideshow
  - This is just an example
  - You should not copy screenshots, benchmarks, or progress reports

# Origin and SimCity

Getting Started

# SimCity acceptable versions

✓ SimCity Complete Edition

✓ SimCity Limited Edition

x SimCity 4

# Downloading SimCity

1. Get the SimCity download codes from online Team Center
   - Complete the two-part registration

2. Download Origin (EA's gaming platform)
   - www.origin.com
   - Download and install Origin
   - Create an Origin account

3. Download SimCity
   - From "Games" menu
   - Redeem your SimCity product code

- See detailed instructions on FC website
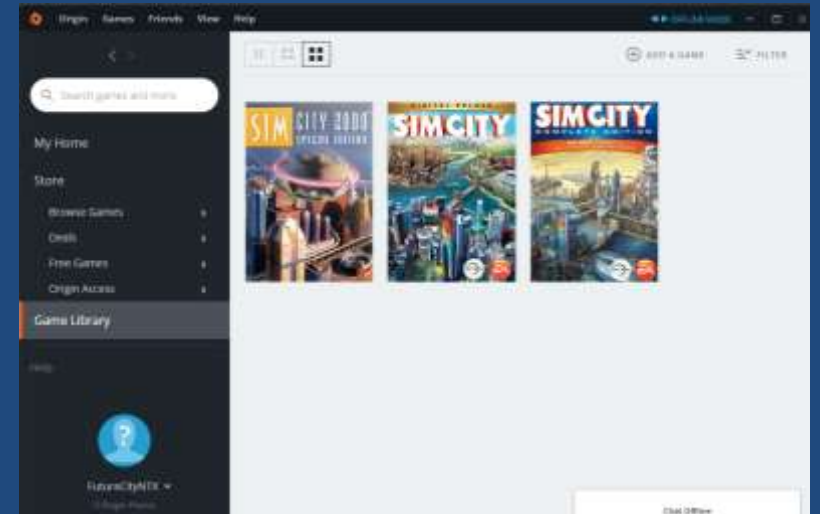
# Downloading SimCity – additional notes

- One Origin account and SimCity download per computer (recommended)

- However, you can use the same Origin ID on more than one computer
  - *The SimCity download is associated with the Origin account*
    - If you go to a second (or third) computer and sign-in with the same Origin account
    - SimCity will automatically download to that computer

  - Logging in to more than one computer with the same Origin account
    - More than one computer can log into the same Origin account if they "go offline"
    - Must wait some undetermined length of time before attempting the second or third log in with the same account

# Downloading SimCity – additional notes

- Additional download codes
  - Additional codes may be available (limited number)
  - Based on supply and demand
  - Contact info@futurecity.org

- School computers – Firewall workaround
  - Instructions on futurecity.org

# Offline Mode

- Log into Origin
- <u>Origin</u> menu – select "Go Offline"
- <u>Game Library</u> – start SimCity
  - Should start in the "Single Player" mode
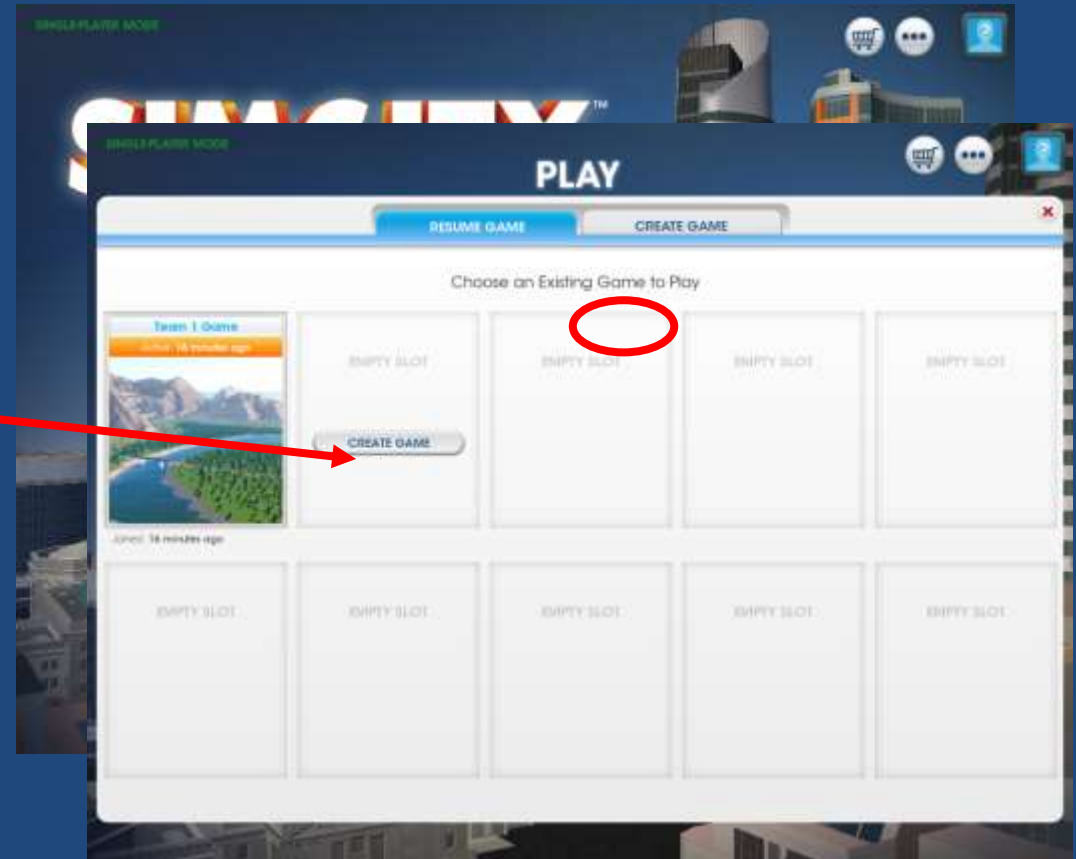
# Note on teams sharing computers

- Teams can share a computer and an Origin account
  - Each team should create its own **Game** (Region)
  - Select "Play" not Resume

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  - Each team should create its own **Game** (Region)
  - Select "Play" not Resume
  - "Create Game"

- Each time a team logs in, make sure they select "Play" (not Resume)
  - Select the correct Game to play

# Sharing computers continued

- Anyone logging into Origin on the computer will be able to access any Game.
  - Make sure teams are playing the correct game
  - Make backup copies of games (just in case)

- Games are stored locally on the hard drive
  - Teams must use the same computer each time to find and continue their game

# Getting Started

Planning for Success

# Start with a Plan

- Before you Play … *Plan*
  - Decide where your city is located
    - Geography, terrain, climate
    - Special city features
  - Decide on goals
    - At least 2 goals
    - Select from list or make up your own
    - Goals need to be
      - Significant to a well-run city
      - Challenging
      - Measurable

# Examples of Goals (p 56)

| SIGNIFICANT GOAL | MEASURES OF ACHIEVING GOALS IN SIMCITY |
|---|---|
| Green city | • 100% clean power generators – wind or solar<br>• Sewage treatment plant (no sewage outflow)<br>• Little or no pollution (< 10%) – air, water, ground, radiation |
| Efficient, effective, city-wide solid-waste management system | • City-wide trash collection, 100% complete daily collection<br>• Limited use of landfills and incinerator pollution blowing out of town. Pollution affecting city < 10%<br>• Recycling centers open and 75% of population is recycling |
| Healthy city | • Clean utilities (100%), clean industry (< 25% industry is dirty)<br>• Walkable – neighborhoods with residences, shopping and employment<br>• Parks & recreation with 20% of citizens visiting<br>• Excellent health facilities – 0 deaths, low sickness, low injuries |

# You are not finished planning …

- Don't stop there …
  - Decide on a basic city layout
    - Transportation networks, roads
    - Public transit
    - Downtown, major business districts
    - Residential and industrial zones
    - Parks and recreation
  - Decide on other city features and services
    - Energy sources, city services, industry
    - What makes your city special, unique
  - Think about how essay theme (Public Spaces) will fit into your city design and function
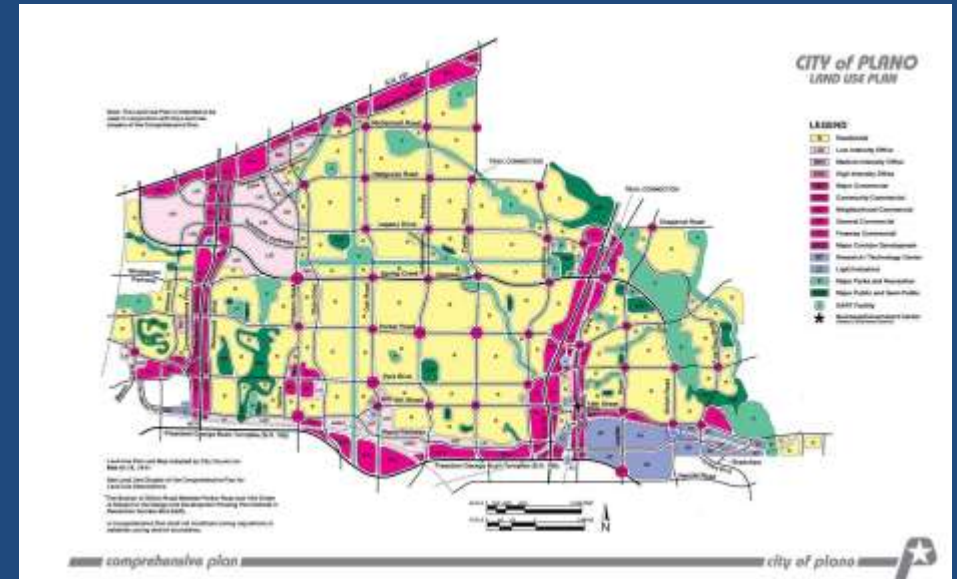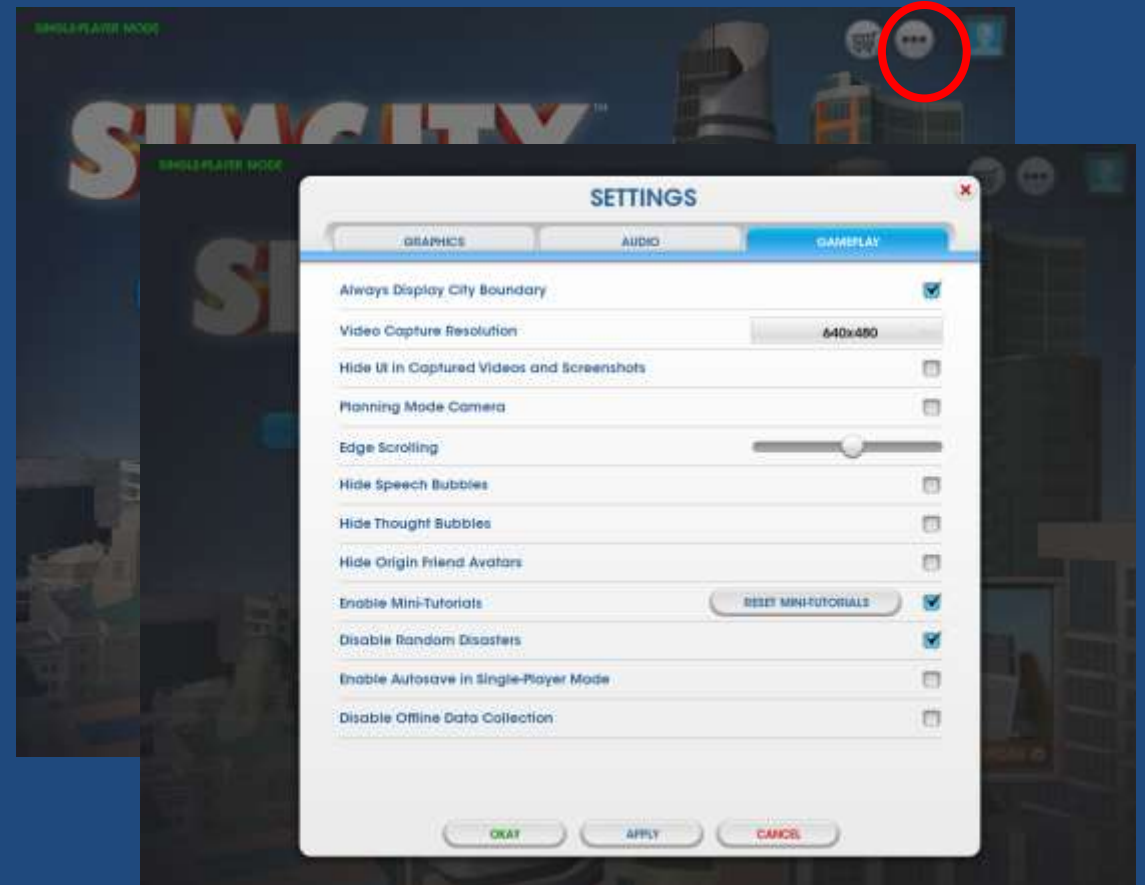
# Setting up SimCity

- Settings
  - Under the Options menu
  - Gameplay tab
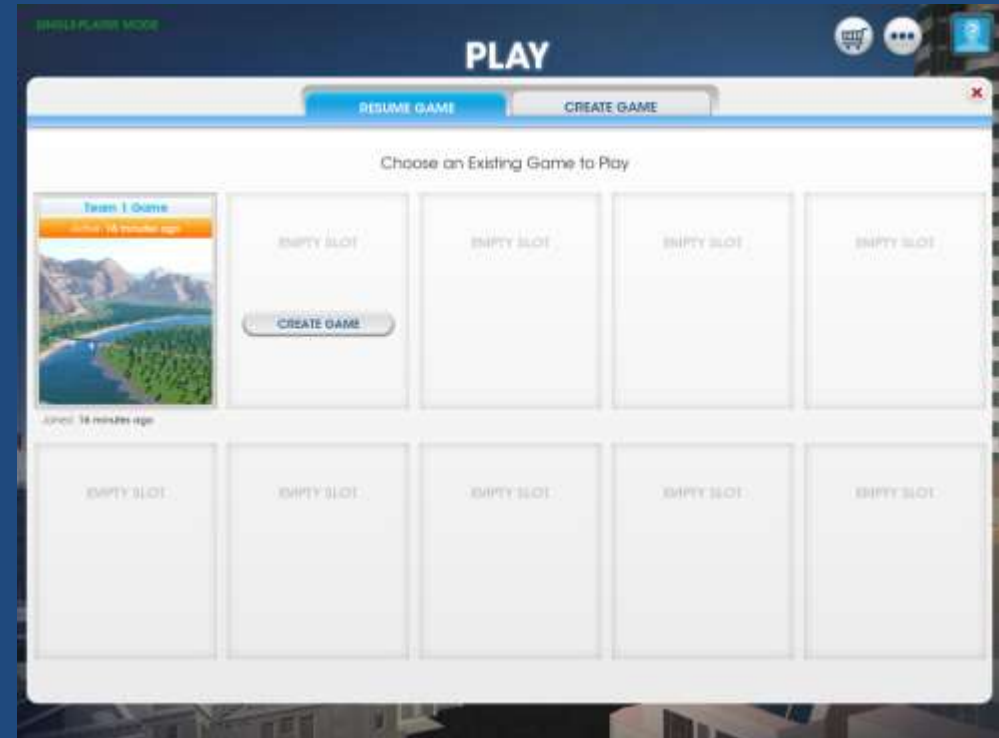
# Setting up SimCity

- Settings
  - Under the Options menu
  - Gameplay tab
- Turn off Random Disasters
- Turn off Auto-save?
  - To test strategies
  - To play with disasters
  - Quit without Save to recover your original city
  - But remember to periodically save your city
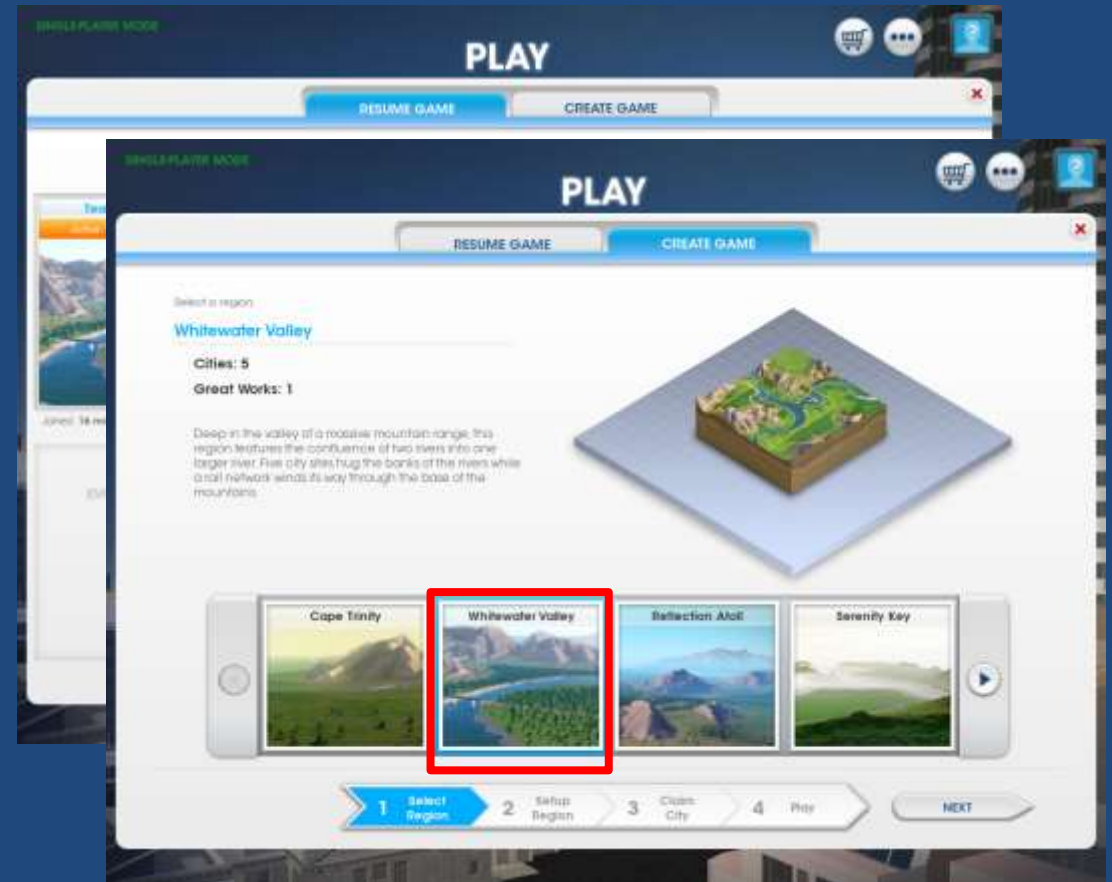
# Getting started

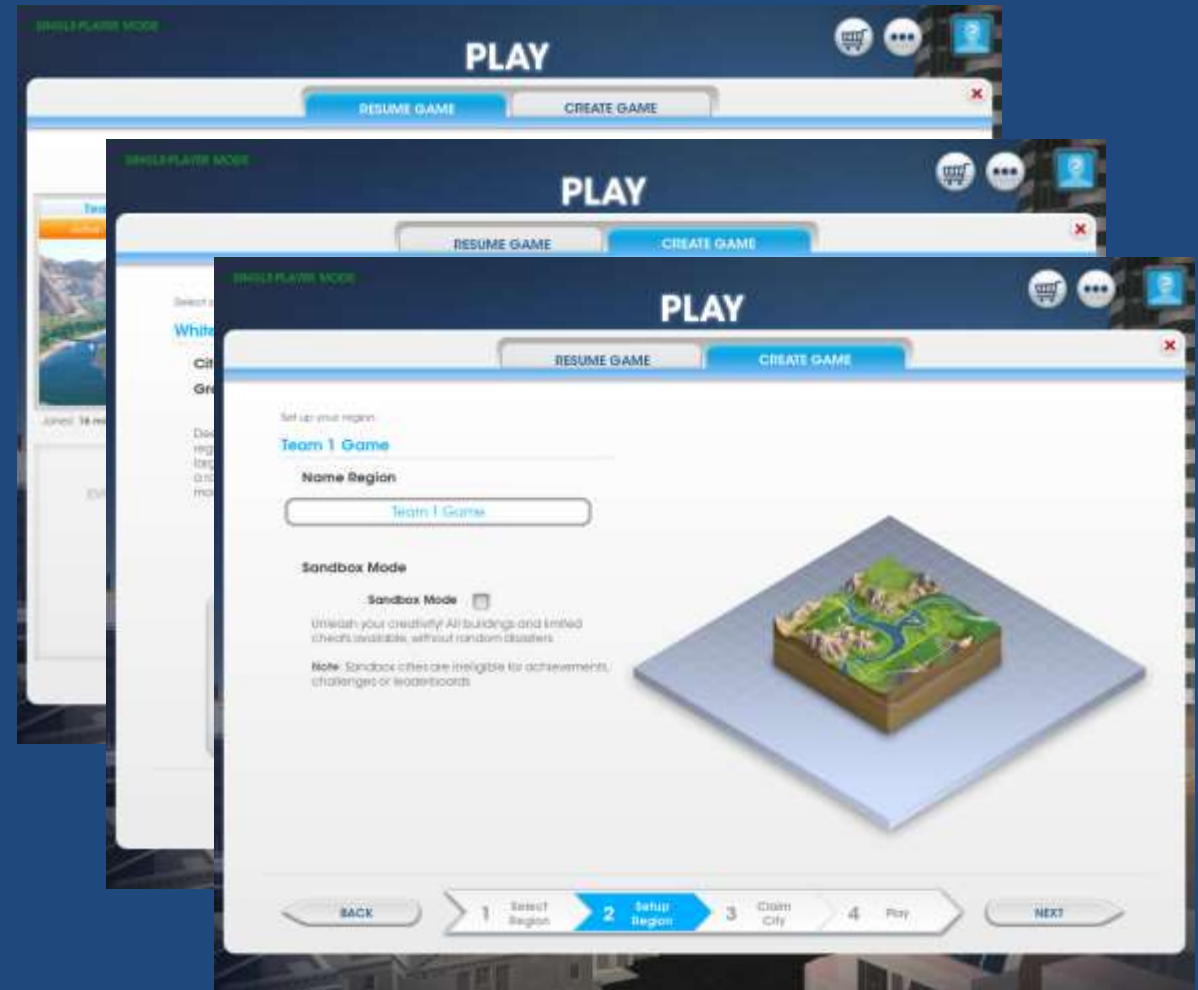- Create a new game

# Getting started

- Create a new game
- Select any region for your city
  - *Do not use Sandbox mode*
  - Give your Region a unique name

# Getting started

- Create a new game
- Select any region for your city
  - *Do not use Sandbox mode*
  - Give your Region a unique name
- Select any of the city sites in the region
  - Recommendation: select a level site
  - Notice the available natural resources for each site, particularly water and wind

# Creating the Slide Show

Tips and How-tos

# Virtual City best practices

- Before testing a new strategy
  - "Save as" to a new game file (create recovery file)

- Preserve your game file at each reporting point
  - When you reach 1$^{st}$ reporting point – Progress Report #1
    - "Save as" to new file = Progress1
      - Don't play this game file
      - Use it for screenshots, benchmarks, and analysis for slideshow
    - When you resume play, use the old game file
  - When you reach 2$^{nd}$ reporting point – Progress Report #2
    - "Save as" to new file = Progress2

# Document virtual city goals

- 2 Goals
  - Goal title
  - Goal metric
    - How you will measure your progress in SimCity

- Carry these same goals throughout the exercise
  - Progress reports 1 & 2 use these same goals

## Trinity Point Goals

| GOALS | SIMCITY MEASUREMENTS |
|---|---|
| Goal 1: Green city | Utilities – green power, sewage treatment Services – 100% trash collection, no accumulated pollution |
| Goal 2: Happy, healthy city | Excellent health facilities with low sickness, injury rates = 0 deaths, < 10% population sick/injured Parks and recreation facilities – 20% of Sims visiting, Park within walking distance: 4-5 blocks |

# Progress Reports

- Progress Report #1
  - City should have made noticeable progress toward goals
  - Population 8000-20000 (suggested range)

- Progress Report #2
  - City should have made significant progress toward goals
    - 50-100% complete
  - City should have made progress beyond report #1
  - Achieving goals is not necessary
  - Population >20000 (suggested range)

# **Progress Reports required elements**

- Screenshots
  - Overall city & zoning
  - Budget detail
  - Population detail
- Benchmark Chart
- Progress toward goals (2)
- Goals screenshots
- Analysis of strategies – what worked and what didn't
- Refining strategies – developing next steps

# Taking screenshots – tips & suggestions

- Overall city view shots (city zoning, goal progress)
  - Pick point-of-view that shows the majority of the city details
  - Keep the same city orientation for all city screenshots
  - Take shots during daytime (simulation day-time)
  - Zoning shots – turn on zones
  - Goal progress – highlight buildings/areas of interest

- For each Progress Report
  - Screenshots should be taken at the same point in time *(pause the game)*
    - Population and treasury should not change screenshot to screenshot

- Taking the screenshot – press "c" on keyboard
  - Screenshot will be stored in Documents/SimCity/Pictures folder

# Required screenshots

1. Overall city & zoning

# Required screenshots



1. Overall city & zoning
2. Budget detail

# Required screenshots

1. Overall city & zoning
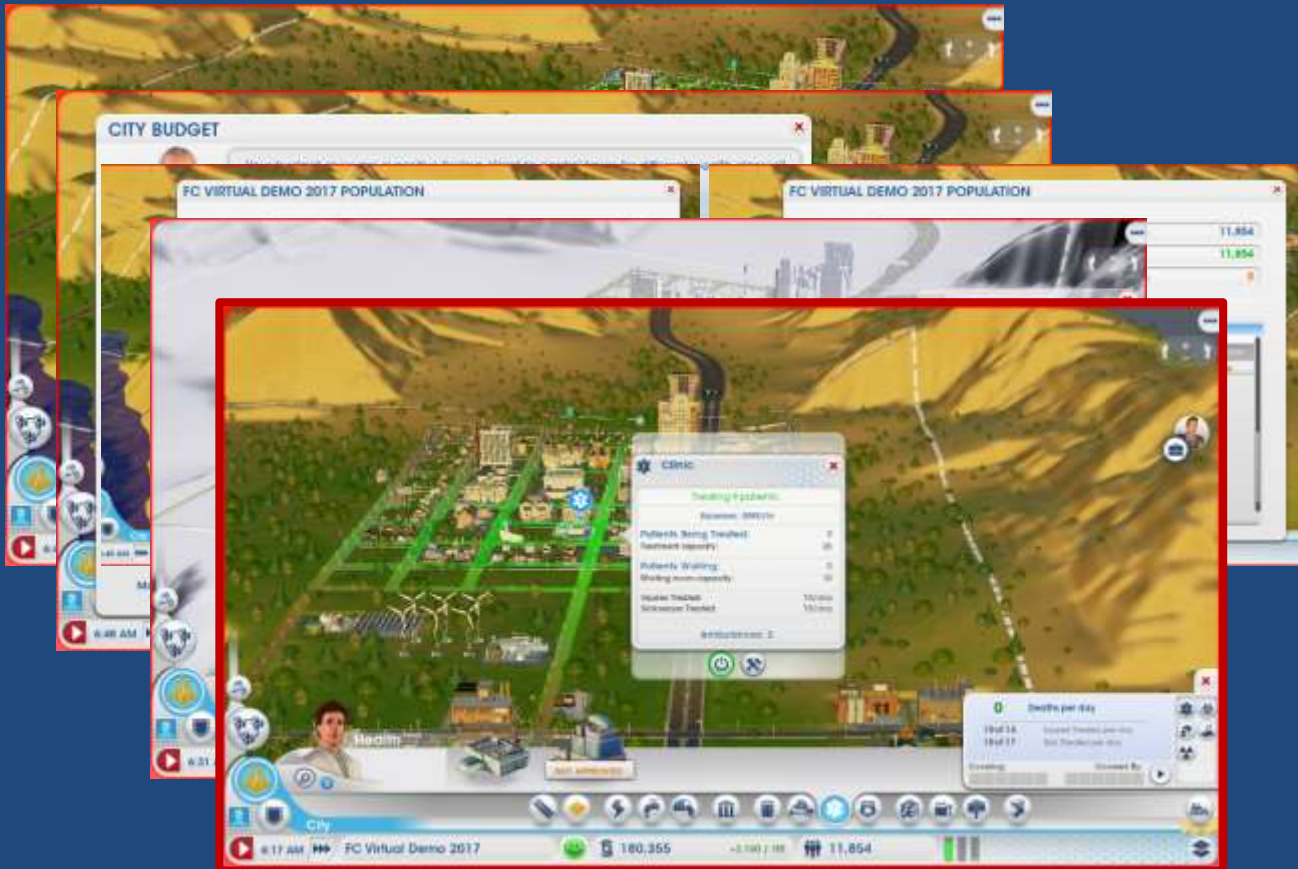2. Budget detail
3. Population detail

# Required screenshots



1. Overall city & zoning
2. Budget detail
3. Population detail
4. Goal #1 detail

# Required screenshots

1. Overall city & zoning
2. Budget detail
3. Population detail
4. Goal #1 detail
5. Goal #2 detail

# Benchmarks

- Complete the benchmark worksheet
  - Use it often (daily) to track Virtual City progress
  - Transcribe values to slide for Progress Report

- Judges are looking for
  - Honest, fair assessment supported by screenshots
    - Don't try to hide problems
  - Data to support your progress toward goals
  - If you have used cheats, gifts, or outsourced services
    - This is the place to document it (under financial aid)

## Benchmark Chart

| | | | | |
|---|---|---|---|---|
| Mayor rating | 83% | | Education | 1 elem sch, 750 desks Ed. Level = 2 Enrollment 91% |
| Zoning, Development | All zone types: R, C, & I; Low, med wealth; Low tech; Lo, med, hi density | | Financial aid | No financial assistance (cheats, gifts, etc.) |
| Parks & Rec | 3 parks, 60 visits (.5%) | | Public transit | None |
| Services | Police – 1 sm station Fire – 1 sm station Health – 1 sm clinic | | Traffic congestion | Light |
| | | | Pollution | Air – very light Water – some Ground – some from sewage outflow and dirty industry Radiation – none |
| Health & Safety | 0 crimes, 1 criminal 1 fires, 0 bldg. burned 0 deaths, .3% sick & injured | | | |
| Utilities | Wind & solar power Water towers Sewer outflow Garbage, landfill | | Unemployment, homelessness | Unemploy = 0 Homeless = 0 |

# Progress toward goals

- Use the same goals and measurements throughout

- Describe progress for each SimCity measurement type

- Judges are looking for
  - Honest, fair assessment of progress – or lack of progress
  - Supported by benchmarks, screenshots

## Progress toward Goal 1

| GOAL 1 | SIMCITY MEASUREMENT | STATUS |
| --- | --- | --- |
| Green city | Utilities – green power, sewage treatment | _____ Not started |
| | | _____ Needs improvement |
| | Services – 100% trash collection, no accumulated pollution | _x_ Made good progress |
| | | _____ Complete |

- Our City's Progress:
  - Power: 100% green with wind and solar power plants
  - Garbage collection with landfill creating ground pollution
  - Sewage outflow removes sewage to outskirts of city, but creates ground pollution

1. Green City goal
   - Measure: green utilities, no pollution
     · Showing ground pollution and green (wind) power

2. Healthy City goal
   - Measure: good health care, many parks & recreation facilities
     · Shows health care status (sick, injured, deaths) and clinic detail

- Same goals
- Report on strategies employed in SimCity to meet goals
  - Strategies that worked well
  - Strategies that didn't work so well
- Judges are looking for an honest, fair assessment
  - That you recognize when something is not working
  - That you learn from and correct mistakes



Strategies: What Worked, What Didn't Work

Worked
- Green utilities:
  - Wind and solar power
  - Basic trash collection
- Healthy, happy:
  - Making sure clinics have facilities to match needs (treatment rooms, ambulances) and are centrally located.
  - Parks increase happiness and satisfaction. Parks can move a neighborhood from low- to med-wealth

Didn't work
- Green utilities:
  - Wind, solar inefficient: require too much land, money per energy output. We are having problems keeping up as city grows.
  - Trash and sewage are polluting. Clean options require advanced technology (not yet available)
- Healthy, happy:
  - Health clinics alone have a hard time keeping up with problems. Need education to lower injury rates and deaths.
  - Industry, sewage, landfills pollute ground, water. Nearby homes, businesses and parks become unhealthy.

# Refining strategies: Next steps

- Same goals

- Judges are looking for
  - Solutions based on your honest, fair assessment (previous slides)
    - If strategies are not working, what is new strategy
    - If strategies are working, what are the next steps
  - Do your plans make sense based on your assessment
  - Are new strategies likely to further progress toward achieving goals



## Refining Strategies: Next steps

- Green city – next steps to getting greener
  - Replace sewage outlet pipes with a treatment plant to eliminate ground pollution
  - Install garbage incinerator (air pollution instead of ground pollution) and recycling plant
  - Invest in advanced research to provide clean options for trash removal and power amplifiers for wind/solar power plants
- Healthy, happy city: next steps to getting happier
  - Plan layout of park & recreation facilities throughout city.
  - Develop facilities appropriate for local demographic (wealth-levels)

# Progress Report #2

- Continues the development from Progress Report #1
- Use the same goals and measurements throughout
  - Honest, fair assessment of progress – or lack of progress
  - Supported by benchmarks, screenshots

- Judges will be looking for
  - Following through on strategies
  - Implementing the plans from Progress Report #1
  - Making continued progress toward achieving goals

# Conclusions

1. What you learned about successful cities from playing SimCity

2. How will you apply what you learned from the Virtual City exercise (simulation) to the rest of your Future City project

The End