

Biggening Corporation

A silly idle/incremental game built using Dynamics 365 Business Central Extensions as a learning series.

Core Concept:

Players are building a Company's overall wealth in a seasonal competition for Biggest Corporation. But, for mysterious lack of staffing reasons, they can only use bots to create items and transactions. Bots have limited abilities and limited resources. Using those limited bots, players will slowly grow and improve their corporation.

Core Mechanics

Bots

Bots come in different types, such as:

- Order Processing
- Purchasers
- Basic Logistics
- Advanced Logistics
- Assembly
- Manufacturing
- Research
- Marketing

Bots will come in different tiers that handle different types of complexity and vary in speed. All bots take Power as an on-going cost and cost various materials to create (which can be recovered upon disassembly).

Goods & Services

The fictional Company will sell items and services they've unlocked through research. Items will have varying ways of acquiring or making them (purchase, assembly, manufacturing). Services will be unlockable adds onto items.

Items will have an 'market demand' that will drive how often a bot selling that item will be able to create an order, and how many. For game simplicity, we'll keep the supply cost and availability to the company static. Based on some limited supply/demand logic, sale price will go up and down slowly.

Items can be configured to target stock levels, depending on Storage Availability in the locations unlocked.

Sales Orders

Bots assigned to Order Processing create Sales Orders for items. The player can configure which item a bot sells to. Each bot will act as a representative to a customer organization. More complex bots can sell multiple items, larger volumes per order, or more frequently.

Purchase Orders

Bots assigned as purchasers will create orders to fulfill supply demands based on Item target stock levels. Each bot will act as a representative to a Vendor organization. There can only be one incoming shipment per Vendor at a time, so more complex bots will unlock the ability to have multiple items, larger volumes per order.

Storage / Locations

You can't have physical items without space to put them. Players will start with a small basic Location. Each location will have a fixed set of Bins with a fixed set of Capacities, as well as a limit on the number of Bots supported for that location. Some locations will only support Basic Logistics, while others will support Advanced Logistics. Each location will have a Purchase Cost and an Operating Cost.

Basic Logistics

Basic logistics locations only support Basic Logistics Bots (and Assembly Bots). These bots will Ship directly from Sales Orders and receive directly from Purchase Orders. They have upgrades that will adjust how many items per operation, as well as how many operations per day.

Advanced Logistics

Advanced Logistics locations only support Advanced Logistics Bots. These Bots will generate and work from Warehouse Documents (Shipments/Receipts/Picks/Put-Away). They have

upgrades that will adjust how many items per operation, as well as how many operations per day, which will have a higher throughput than Basic Logistics Bots.

Assembly

Some items are not sold directly, but as “Assemblies” or kits. This increases the value of the raw items and increases how many can be shipped out. Basic Logistics locations can support Assembly tasks.

Manufacturing

Higher value items are created by bots in Manufacturing Locations. These require fulfillment from Adv. Logistics locations, as they will create Picks/Put-Away/Movement documents. Items will have varying numbers of steps, work times. Upgrading Manufacturing Bots will increase how many items they can manufacture at a time.

Research

Research will be the ‘tech tree’ mechanic. Research Bots are bots that can be assigned to unlock different technologies (new items, bot levels, systems). Various technologies require varying quantities of research points. Upgrading research bots will increase how quickly they generate research points. Most of these will be simple “Mark 1” through “Mark 9” type upgrades, depending on the bot type. Some Location tech upgrades will reduce power cost at an up-front cost (solar power), for example.

Marketing

Marketing Bots will generate campaigns (which may decrease prices!) that increase the demand for random items.

Power

All bots and locations will generate an on-going cost per day in power requirements. The expense of this should be planned for, as this is one of the main ways to run out of funding and generate a Game Over for the season

Time

Each ‘season’ will run for 2 months to give people a chance to join in. Each ‘day’ in the game will be ticked over every 15 minutes.

Money & Wealth

Players will start with a small cash reserve. As they transact, this balance will go up and down. When fixed assets (like bots and locations) are acquired, they increase the overall Wealth of the company as if they are the value spent. This will be handled through basic G/L logic. A cash account, as well as Tangible Asset accounts for Bots and Locations, as well as Inventory Accounts. Effectively, there will be a Chart of Accounts. We can use this known chart layout to easily compute the Wealth of each company

Competition

Each game day, the Wealth will be calculated and stored. We'll want to be able to show current listings and trending data in chart parts.

System Needs

We'll need to define

1. Bots
 - a. Shared attributes (purchase cost, Power cost per day)
 - b. Per-Type Attributes
2. Locations (basic storage, advanced storage, manufacturing)
 - a. Shared attributes (purchase cost, Power cost per day)
 - b. Per-Type Attributes
3. Items
 - a. Resale
 - b. Components
 - c. Assemblies
 - d. Manufactured Items
 - i. Routings
 - ii. BOM
4. Services
5. Customers
6. Vendors
7. Chart of Accounts
8. Research / Tech Tree

These should all be defined in a "Master Company" that will operate as the template origin for all other companies in the system.

System Manager

We need a “Systems Manager” dashboard for the manager to

- Create new ‘players’ - which will require a username, password, email
- Dashboard overview of player list (last login date, wealth, current season standing)
- Season Management - view matrix data from past seasons

Players

- Mobile friendly Role Center showing
 - Season Standing
 - Bot counts
 - Location Counts
 - Daily (game day) Wealth Change
 - Projected next 7 Wealth Change
- Bot Management
 - See the current Bot list (also upgrade bots)
 - Purchase new Bots
 - Sell Bots
- Location Management
 - See the current Location list (upgrades)
 - Purchase new Locations
 - Sell Locations
 - Review Location inventory (incl /projection?)
- Chart of Accounts
 - See the revenue flow
 - Current wealth numbers
- Research Management
 - Review the tech tree
 - Enqueue research projects for the bots to work on
- Jump offs to the standard areas of the systems
 - Customers
 - Vendors
 - Items
 - Resources
 - Company Information (so they can set the Company Name)
- Email Management
 - Set a time of Real World day to get a summary email
 - Set Low Wealth Alert emails
 - Season End Results

