



# TRUDY'S MECHANICALS

## Trudy's Mechanicals Overview

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# CONTENTS

Description .....	3
Key Features.....	3
Factsheet .....	3
Quantitative Scope .....	3
Game Summary.....	4
Setting .....	4
Presentation.....	5
Game Loop .....	6
Core Gameplay .....	7
Combat.....	7
Environments .....	8
Units .....	9
Heroes .....	10
Troops.....	11
Bosses.....	11
Development History.....	13
The Incubator Team .....	13
Preproduction .....	13
Financing & Development.....	14
Marketing Outreach.....	14
Social Media .....	14
Development Logs.....	15
Website Launch & Online Sites/Video Channels .....	15
Steampunk Outreach .....	15
Final Goals & Considerations .....	17
Current Status.....	17
Extra Features.....	18
Additional Funding .....	19
Projected Sales .....	21

## Description

Trudy's Mechanicals is a turn-based strategy game set aboard a giant Steampunk dirigible. The title pits a host of combat veterans, bespectacled scholars, and industrial labourers against the corrupt gentry in a full-scale guerrilla war.

## Key Features

- Distinct characters with unique abilities akin to MOBA heroes.
- Fully interactive 3D environments that provide a new set of choices with each battle.
- Slavic-rooted Steampunk setting beautifully illustrated in a painterly style.
- Intuitive UI that makes complex actions a breeze to preview and execute.
- Streamlined progression with plenty of optional content for those willing to dig deeper.

## Factsheet

- Genre: turn-based strategy
- Comparable Titles: XCOM: Enemy Unknown, Final Fantasy Tactics
- Platforms: PC with potential ports to Mac, Linux, PS4 and others
- Engine: proprietary 3D engine
- Release Date: September 2016/January 2017
- Price Point: \$20-\$25
- Budget Estimate: \$650,000+
- Website: <http://trudysmechanicals.com/>

## Quantitative Scope

- 3 hero units, each with a base and upgraded version.
- 12 common units, each with a base and upgraded version.
- 3 unique boss units.
- 4 distinct biomes, each with a unique texture and prop set (hundreds of variations).
- 26 maps with multiple prop variations.
- 52 interactive objects.
- 31 mandatory story missions.
- 50 optional battles and side events.
- 8 fully-voiced 2D cutscenes.
- 10-15 hours total game length.



# GAME SUMMARY



## Setting

Long ago, steam-powered engines brought a golden age to the people of the surface world. Wondrous contraptions performed everyday labours at the seemingly small cost of coal exhausts. However, the pollution gradually increased, eventually becoming too noxious for the surfacers. The people looked to the skies for salvation, clambering onto zeppelins and dirigibles to rise above the toxic smog.

One of these ships was a flying behemoth named Trudy.

To ensure their survival, Trudy's rulers quickly began to alter the ship. Hydroponic gardens were planted to supply food, conveyors were installed to transport waste for repurposing, and giant furnaces were erected to fabricate goods. It was hard work, and Trudy's passengers struggled amidst the cold, oxygen-poor skies.

They had to become Mechanicals.

Brave labourers swapped body parts for power tools in order to perform their tasks more efficiently. Trudy continued to grow, but the Mechanicals found



themselves chained to their jobs. Trudy's rulers exploited this, growing rich and content on the labours of their servants.

These truths were buried and long forgotten until one scholar revealed them to the public. Joined by a disgraced military general and a child of the underworld, they sparked a rebellion. The player leads this troika as they struggle to unveil Trudy's secret history and topple its corrupt leaders.

## Presentation

The overall visual style of Trudy's Mechanicals is fairly stylized, but more gritty and grotesque than cartoonish. This is achieved through slightly exaggerated model proportions and a

painterly style that embeds all textures with a fair amount of baked-in detail. The approach is conducive to producing high-contrast scenes with easily distinguishable details without relying on expensive lighting techniques. These savings allow more processing power to be dedicated to particle and shader effects, enhancing the overall ambience.

The conceptual principle behind all of Trudy's designs is a Steampunk aesthetic, but one that borrows more from Slavic touchstones than Victorian ones. Fur caps and feathered garb replace the more common tuxedos and top hats, while fancy brandies are exchanged for vegetable spirits. The somewhat bleak history of Slavic cultures is also



represented through the Mechanicals themselves – individuals whose lives are carelessly thrown away while they themselves struggle for a greater good.

The folk nature of the game's conflict is further alluded to through Balkan and Romani compositions that rely on instruments such as fiddles, accordions, dulcimers and mandolins. The palette avoids typical orchestral textures, instead relying on distinct instruments paired with industrial ambience of the airship.

Framing all these components is a theatre stage that serves as main title screen and overall UI motif. Menus and popups resemble decorative theatre programs, and the on-stage performance retells the events that took place aboard Trudy as a silhouetted audience watches on.

## Game Loop

Soon after the game's introductory sequence, the player gains access to the main game hub. This screen displays an image of the airship, and selectable icons for any currently available missions, story events, arena battles, or 2D cutscenes.

At any one time, multiple optional icons are present, along with one big icon that progresses the story. This allows the player to pick and choose which



side events to pursue, and take time to prepare for mandatory missions.

All possible options lead to sequences that build on the narrative, but they also provide tangible rewards in the form of monetary resources used to hire combatants, new unit unlocks, ability upgrades for existing units, and various boons such as artifacts that allow additional in-game object interactions. As events are successfully completed, the player's group earns renown aboard the ship, increasing a popularity rating that provides extra intelligence for future missions.

Following the conclusion of any single event, the player returns to the hub and old events disappear as new ones open up. This base loop continues throughout the entirety of the game.



# CORE GAMEPLAY

## Combat

Turn-based battles between two teams of up to six combatants form the core of the gameplay. Each unit takes a single turn based on their speed statistic, and can move and execute a single ability during this time. Typical tactics staples such as elemental resistances/weaknesses are present, as well as bonuses for attacking from a higher ground and inflicting status effects.

Combat missions have varied objectives such as escaping from an ambush, defeating a particular enemy, or using specific objects in the environment. All missions require the presence of one hero unit, but the makeup of the remainder of the squad is often left to the player's preference.

One element of the turn-based genre that Trudy expressly limits is a general sluggishness to combat. In tactics games, the time required to evaluate a battlefield, check ability ranges, determine an efficient course of action, confirm its selection, and watch its execution play out tends to drag out. In order to compensate for this issue, Trudy implements a passive preview



system that instantly displays all the currently available attack options from all valid movement ranges. In addition, there are no extraneous confirmations associated with giving orders, and their execution is designed to be more kinetic and impactful than commonly-used board game abstractions.

## Environments

The 3D maps where all missions take place are specifically designed to provide variation in tactics. Some sprawl vertically and benefit units that can fly or have high traversal capabilities, while others are cluttered with debris that smaller units can use as cover by breaking line-of-sight.

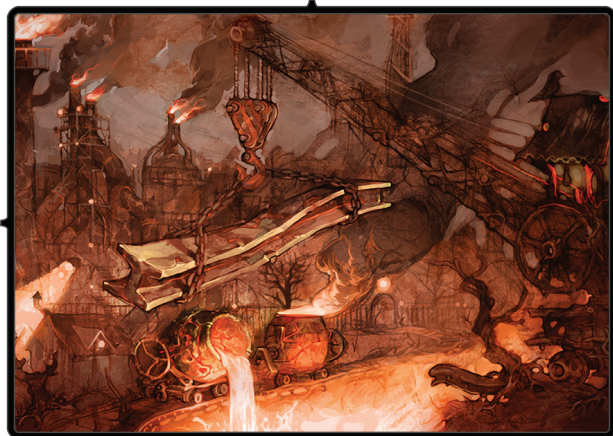
Many objects found in the environment are destructible and can be removed to create new pathways, but more complex interactions are also present. Elevators and extendable bridges aid movement, chests and lockers can be looted for extra ammo, security stations summon temporary allies, and ventilators can suck in toxic clouds or blanket areas in impenetrable gas. The four main biomes that compose Trudy all contain specific props and design considerations:



**The Underworld** – The inside of the ship serves as a home to the Mechanicals, and over time the area has become sewer-like due to neglected plumbing. The dampness proved hospitable to various toxic life forms – both plant and animal – which are quite hostile to anyone who gets close. The Underworld's long, fairly flat halls tend to be cluttered with lots of destructible objects, and its steam pipes can be activated or simply shot from afar to block passages and trap opponents.

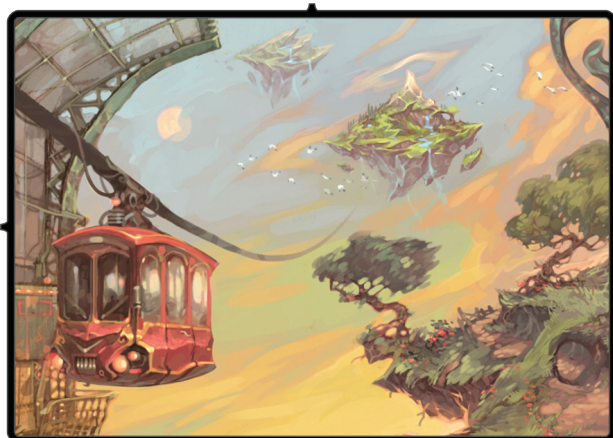
**The Forge** – Built on top of the ship, the Forge is a series of factories that recycle all of the raw materials aboard Trudy and serve as the headquarters for Mechanization procedures. The sprawling towers contain a lot of walkways, elevators, and staircases that aid in traversing the largely vertical maps. The areas within the





Forge are also highly volatile, hosting explosive barrels, heat exhausts for melting metals, and movable carts and conveyors that ferry scrap.

**The Aerie** – The rocky, floating islands that make up the Aerie serve as home to the Gentry. The Aerie largely features pristine yards and gardens fenced off by iron scrollwork and marble facades. However, walking off the beaten path it's easy to find deadly drops and toxic clouds that tend to form in the open. The Aerie islands



are interconnected by a series of cable car routes, and security stations ensure that Constables are always close by to take care of any disputes.

**The Labyrinths** – Deep in the bowels of the ship, the Labyrinths were once a modular warehouse for Trudy's supplies. Over time, the mechanism controlling warehouse compartmentalization went haywire and the entire area is now highly unstable and dangerous. Floor tiles rise and lower randomly, walls close in without warning, and electrical coils arc out with violent lightning. For many the lure of the Labyrinths is still very strong, though, as old treasures and inventions reside in its depths.

## Units

The overall philosophy behind the design of all combat units is one of variety and synergy. Much like MOBA games such as League of Legends and Dota, every unit in Trudy is created with a distinct personality and a unique set of combat abilities. There is minimal overlap in the style of how the units play, and their effectiveness is increased through mutual cooperation.



## Heroes

There are three main hero units that lead the rebellion against Trudy's Gentry, each one representing a unique narrative character. It never costs the player any money to take a hero unit into a mission, and each hero can obtain a single, permanent upgrade that boosts their statistics and grants new abilities.

**Darius** – A lowly stenographer, Darius had his fingers replaced by mechanical tentacles in order to use giant, punch-card writers in the Aerie's Lyceum. During his time at the university, he learned much about Trudy's past and eventually started a seditious newspaper. In battle, Darius' tentacles allow him to grapple across long distances, shoving enemies backwards or draining them of energy to refill his own health.

**Renatus** – Formerly a lieutenant in Trudy's military, Renatus succumbed to

depression after his children perished in the line of duty. Feeling guilty for pushing them into a career of law enforcement, Renatus tried to chase away his sorrow with the drug sweetsting, eventually amputating his hand for a drill in order to earn coin performing excavation work. Renatus now uses his drill in battle, viciously ramming into foes with his bulk and getting a bloodthirst-powered extra turn whenever a target falls.

**Valerjan** – At a young age, Valerjan suffered through a traumatic experience when he got stuck in the Labyrinths. In order to break his son's paralyzing fear, his father commissioned specialized jets that allowed Valerjan to fly anywhere he wished. The youngster embraced these new abilities, eventually taking over the Underworld's Peacekeeper guild and lobbing bombs from up high at anyone looking to exploit the Mechanicals.





## Troops

Regular troops are composed of general labourers aboard Trudy as well various robotic contraptions and organic lifeforms. Multiple regular troops of any type can participate in battles on either side, and each type can be upgrade just like hero units. However, unlike heroes, regular troops require funds to be hired and their upgraded versions are more expensive than the base ones. Once regular units are upgraded, though, it's still possible to hire unupgraded units.

The 12 regular troops are:

**Constable** – performs various melee attacks with his energy staff that can stun targets and deflect their attacks.

**Butler Bot** – uses a torch to burn rows of enemies and create smoke clouds that provide cover.

**Mechanic** – heals teammates and can interact with all environment objects with no restrictions.

**Beholder** – whittles down groups of enemies using sweeping heat rays and summons additional backup.

**Automaton** – pushes back foes with powerful blows, but occasionally overheats and has to shut down.

**Waspmonger** – creates noxious clouds that debilitate multiple opponents through status effects.

**Koschei** – dodges projectiles and chases down enemies, getting free hits on any that try to move away.

**Bauk** – shakes off status effects and counters any melee strikes, severely lowering the movement range of victims.

**Ravager** – tosses organic mines for area denial and peppers enemies with weak flintlock blasts.

**Sewer Slug** – drenches enemies in sludge that's then spread to the rest of the map, healing the slugs while damaging their enemies.

**Corsair** – automatically snipes any enemies that get close, lighting some on fire with incendiary rounds.

**Supplier** – sucks in enemies from afar and refills ammunition stocks of allies.

## Bosses

Boss units are AI controlled enemies that appear in specialized set-pieces to provide extra variety and punctuate the narrative's climactic moments.

Boss battles often involve distinct mechanics not found in other missions and serve to add memorable touchstones for the game.

**The Architect** – A rotund Automaton responsible for the corruption of the Labyrinths' modular layout. Equipped with an energy staff, the Architect can alter the layout of the Labyrinths at will, raising and dropping individual units from great heights, surrounding himself with bottomless pits, and remotely activating energy coils.

**The Airwhale** – The massive airwhale floats high above the surface world by inflating its numerous air sacks with buoyant gas. Trudy's warmth, lights, and vegetation attract these beasts, and

they often wreak havoc on the ship. To combat an airwhale, fighters attempt to pierce its sacks to lower it, boarding it to target its vulnerable blowhole directly

**The Foreman** – Deep in the bowels of the Labyrinths rests the final boss of Trudy's Mechanicals, a seemingly unthreatening Automaton whose torso stores musical cylinders. The Foreman rotates these to play songs that give secret instructions to all robots aboard Trudy, and his deranged tunes have caused the Architect and many others to become defective. Playing his songs, the Foreman summons all sorts of Automaton to his aid as he desperately tries to prevent the humans from wresting control of the ship.





# DEVELOPMENT HISTORY

## The Incubator Team

Incubator Games is based in Toronto, Ontario, with 7 full-time employees, 2 full-time contractors, and various freelancing partners who work in the company office and remotely. The team responsible for Trudy's Mechanicals is as follows:

**Radek Koncewicz** – production, design, writing

**David Churchill** – engine and gameplay programming

**Tristan Campbell** – engine and tool programming

**Ben Henry** – concept art, illustrations, texturing

**Matt Kidd** – animations and visual effects

**Derek Koncewicz** – graphic design, UI implementation

**Junwoo Park** – modeling

The entire team has shared continuous QA duties throughout development, and two additional freelancers have contributed to the project:

**Kyle Hicks** – sound effects and music composition

**Laura Marshall** – PR and marketing

Two other Incubator Games employees, a senior and a junior programmer, have occasionally helped development when not focusing on work-for-hire projects, and would be available in the future if required.

## Preproduction

The design and early planning for Trudy's Mechanicals began in 2011. Tax return incentives allowed Incubator Games to spend time developing a proprietary 3D engine in order to avoid extra licensing costs while retaining full control over future

porting needs. Preliminary setting and design documents were compiled concurrently with the technical development, and in 2012 work began on an early proof of concept.

The design and scope of the game was refined based on the first playable version, and a comprehensive tools list was drafted for future production. Work on further prototypes continued throughout 2013 in between work-for-hire projects.

## Financing & Development

When the initial prototyping phase concluded, Incubator Games pitched Trudy's Mechanicals to the OMDC IDF fund, and was successfully awarded the maximum amount of \$150,000 ([http://www.omdc.on.ca/ENewsletter/April\\_2014/page4\\_eng.html](http://www.omdc.on.ca/ENewsletter/April_2014/page4_eng.html)). Incubator Games added another \$300,000 to the budget, for a total of \$450,000, and spent the past two years developing the game full time.

Trudy's Mechanicals is currently content-complete, with all missions, maps, units, and other core assets in place, but requires additional polish to be ready for the market.

## Marketing Outreach

### Social Media

Incubator Games began to promote the game on Twitter when initial concept art and other assets became available. In the span of a few months, the IG Twitter account grew from 300+ followers to 7,500+, with 70,000 to 150,000 impressions each month. According to [twitteraudit.com](https://www.twitteraudit.com/IncubatorGames), 97% of our followers are genuine users who are active on the platform (<https://www.twitteraudit.com/IncubatorGames>).

Due to the success of our Twitter outreach, Incubator Games has begun similar initiatives with Facebook, tumblr, and deviantArt, which has resulted in various fan sites showcasing Trudy's Mechanicals (<http://gameconceptart.tumblr.com/post/113425067193/conceptartthings-the-updated>, <http://conceptartthings.tumblr.com/post/115153383011/the-forge-spewing-molten-metal-in-trudys>).

The #ScreenshotSaturday hashtag has also proven quite useful at garnering attention on Reddit and Twitter, earning Trudy's Mechanicals a winning spot on GameDev.net's screenshot showdown ([http://www.gamedev.net/page/showdown/view.html/\\_/screenshot-daily-r78994](http://www.gamedev.net/page/showdown/view.html/_/screenshot-daily-r78994)), and gave the game some exposure via TechRapttr before it



was ever officially announced (<http://techraptor.net/content/screenshot-survey-colorful-kingdoms>).

## Development Logs

In order to reach out to the development community, the materials for posts on the official Incubator Games website (<http://www.incubatorgames.com/20141202/trudys-mechanicals/>) were initially posted on various forums such as TIG Source (<http://forums.tigsource.com/index.php?topic=42960.0>), Make Game (<http://forum.makegame.me/t/trudys-mechanicals-3d-tactics-game-wip-devlog/>), Indie Gamer (<http://forums.indiegamer.com/threads/wip-trudys-mechanicals-3d-steampunk-tactics-game.39042/>), and GameDev.net (<http://www.gamedev.net/topic/663811-trudys-mechanicals-steampunk-tactics-new-trailer/>).

Collectively these posts have received hundreds of replies and thousands of impressions, and were used as a base for writing various featured posts on Gamasutra ([http://www.gamasutra.com/blogs/RadekKoncewicz/20150306/238123/Pathing\\_\\_Movement\\_on\\_a\\_3D\\_Grid.php](http://www.gamasutra.com/blogs/RadekKoncewicz/20150306/238123/Pathing__Movement_on_a_3D_Grid.php)) that were also mirrored on indiedb.com (<http://www.indiedb.com/games/trudys-mechanicals/news/trudy-and-animation-rigs>).

## Website Launch & Online Sites/Video Channels

When the official Trudy's Mechanicals website (<http://trudysmechanicals.com/>) was launched, Incubator Games sent out a press release to various outlets derived from a full list of over 650 industry reporters. Despite offering only a 2D teaser trailer and mockup images with no real in-game footage, the announcement received considerable attention, the most notable being a news post on IndieGames.com ([http://indiegames.com/2015/08/take\\_to\\_the\\_skies\\_in\\_trudys\\_me.html](http://indiegames.com/2015/08/take_to_the_skies_in_trudys_me.html)) which generated thousands of impressions.

Following the website launch, Incubator Games received numerous requests from YouTube channels and Twitch streamers, and added them to a growing list of 450+ contacts that can be approached to feature Trudy. One of them, a YouTube personality with nearly 300,000 subscribers who focuses on strategy games, chatted with us in-person during a local meetup and asked for a copy of the game to showcase once it was ready.

## Steampunk Outreach

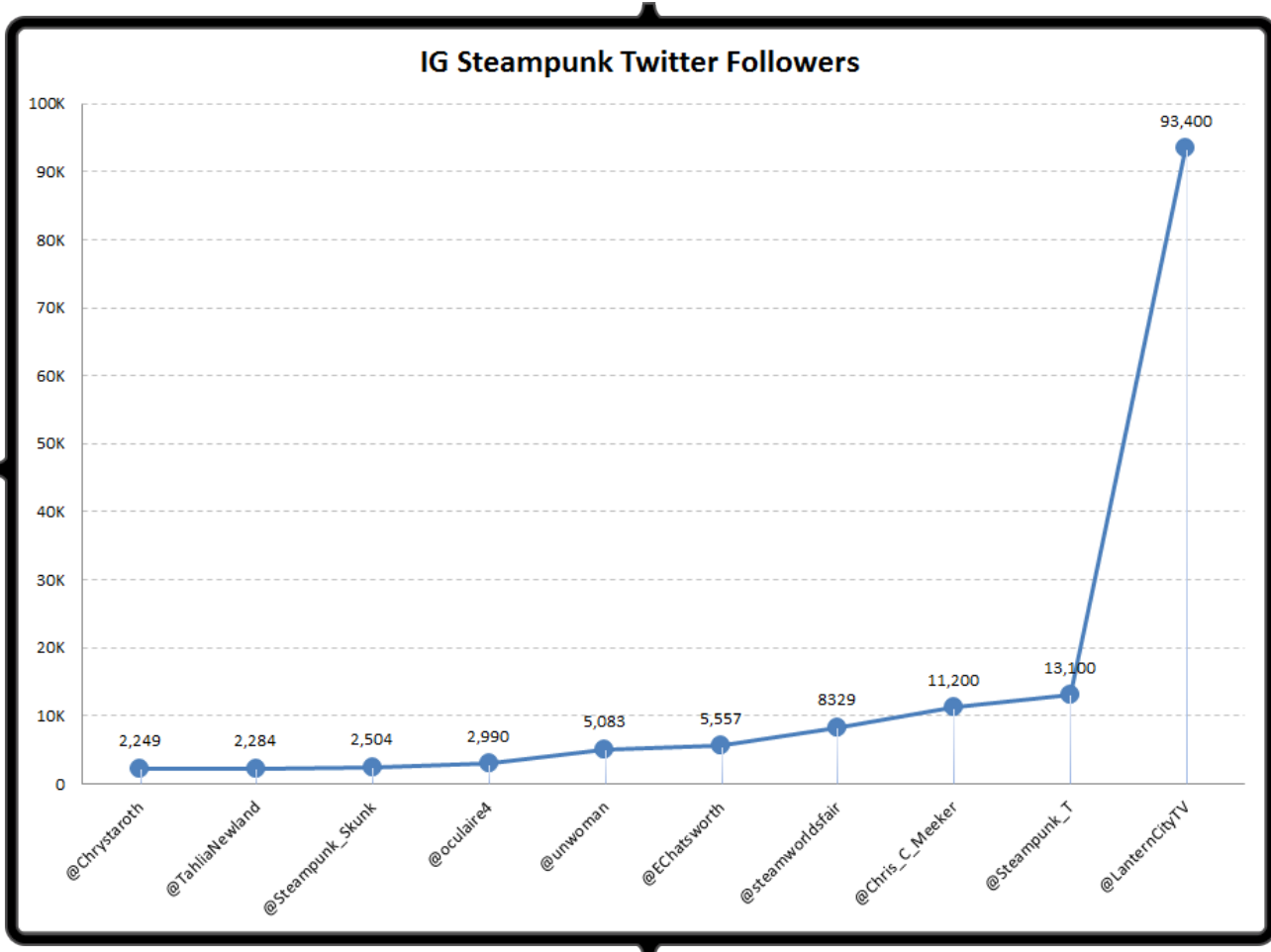
A large amount of our followers appear to be Steampunk enthusiasts who do not focus on gaming, but are interested in the art and story of Trudy's Mechanicals. The launch of our website was featured by Steampunk Canada (<http://www.steampunkcanada.ca/apps/blog/entries/show/43525692-trudy-s-mechanicals>),

and resulted in an offer to include a free advertisement in the gift bag of the Steam House Con (<https://www.facebook.com/steamcoffeerevolution>).

Judging by our recent Twitter followers, a substantial proportion of Trudy's fans adore Steampunk and bring with them an external audience to the game. Below is a chart showing our top-10 non-gamer Twitter followers who are predominantly interested in Steampunk, and the amount of followers they have.

This discovery has led us to begin

cataloguing various popular Steampunk sites, Facebook pages, and Twitter accounts for potential targeted-advertising and additional coverage of the game. Many of these sites such as Brass Goggles (<http://brassgoggles.co.uk/forum/>), the Steampunk World's Fair (<https://www.facebook.com/SteampunkWorldsFair/>), and the Steampunk Magazine (<http://www.steampunkmagazine.com/>) receive tens of thousands of daily visitors and could prove to be very useful partners in promoting Trudy's Mechanicals.

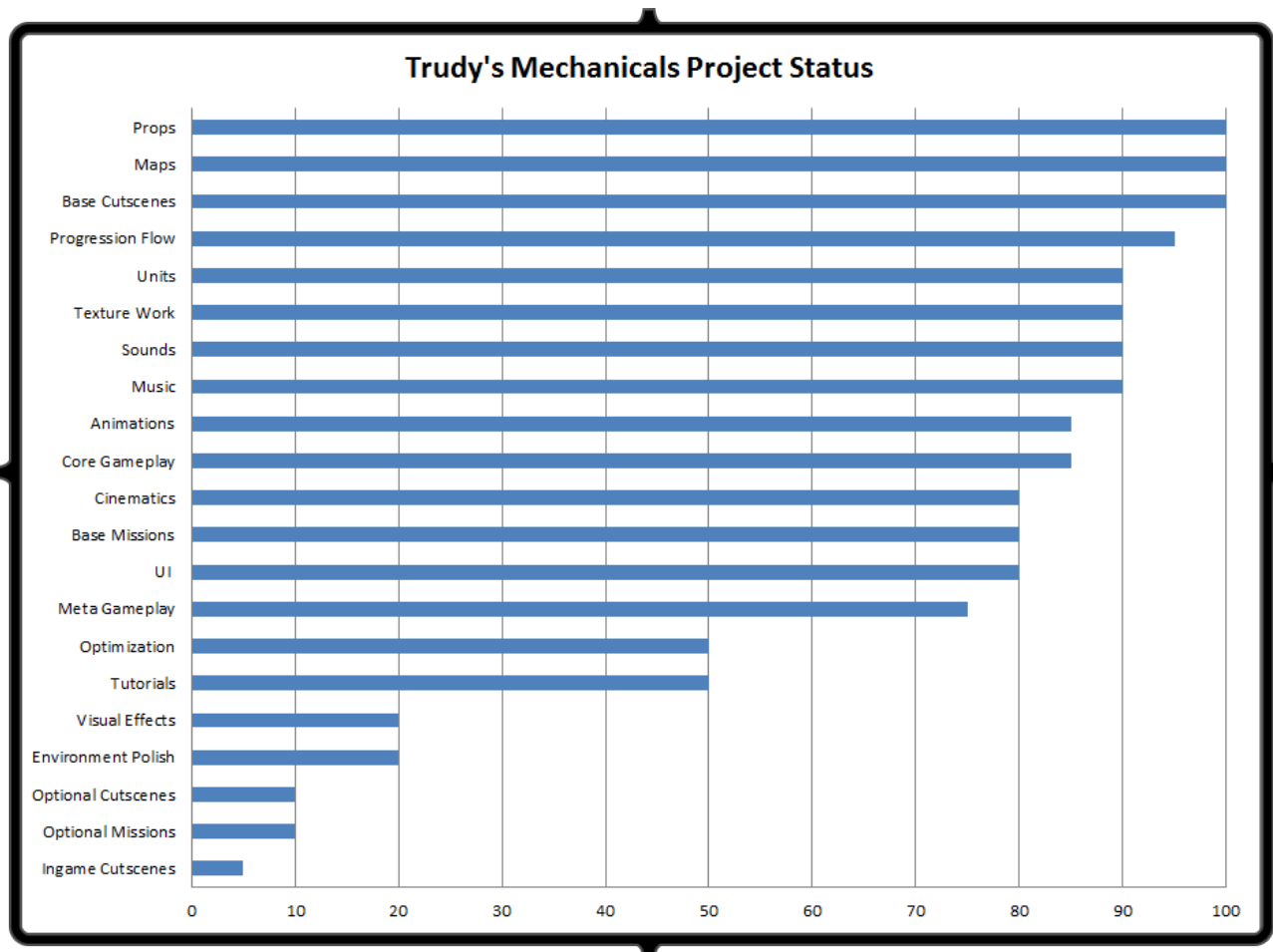





# FINAL GOALS & CONSIDERATIONS

## Current Status

Below is a chart outlining the completion status of the project's various elements:





While most of the core components are in place with minimal tweaking required, a few substantial elements need to be added or completed. In addition to a thorough tutorial system, about 80% of the game's maps and units lack proper lighting, particles, and shader effects. These are crucial to presenting a high-quality aesthetic, but require substantial development time.

Optional missions and in-game cutscenes are also missing, or presented via choose-your-own-adventure pop-ups, and these would greatly benefit from an upgrade to interactive, in-game cutscenes. Fans of strategy RPGs and Steampunk enthusiasts cherish interesting settings and narratives, and would be very disappointed if these were not presented with the same production values as the combat components.

We estimate that an additional **\$200,000** and **6 months** of development time is required to complete the project. This would position Trudy's Mechanicals for a Fall 2016 or early 2017 release in order to avoid Steam Summer/Winter sales, and the holiday rush of AAA titles."

## Extra Features

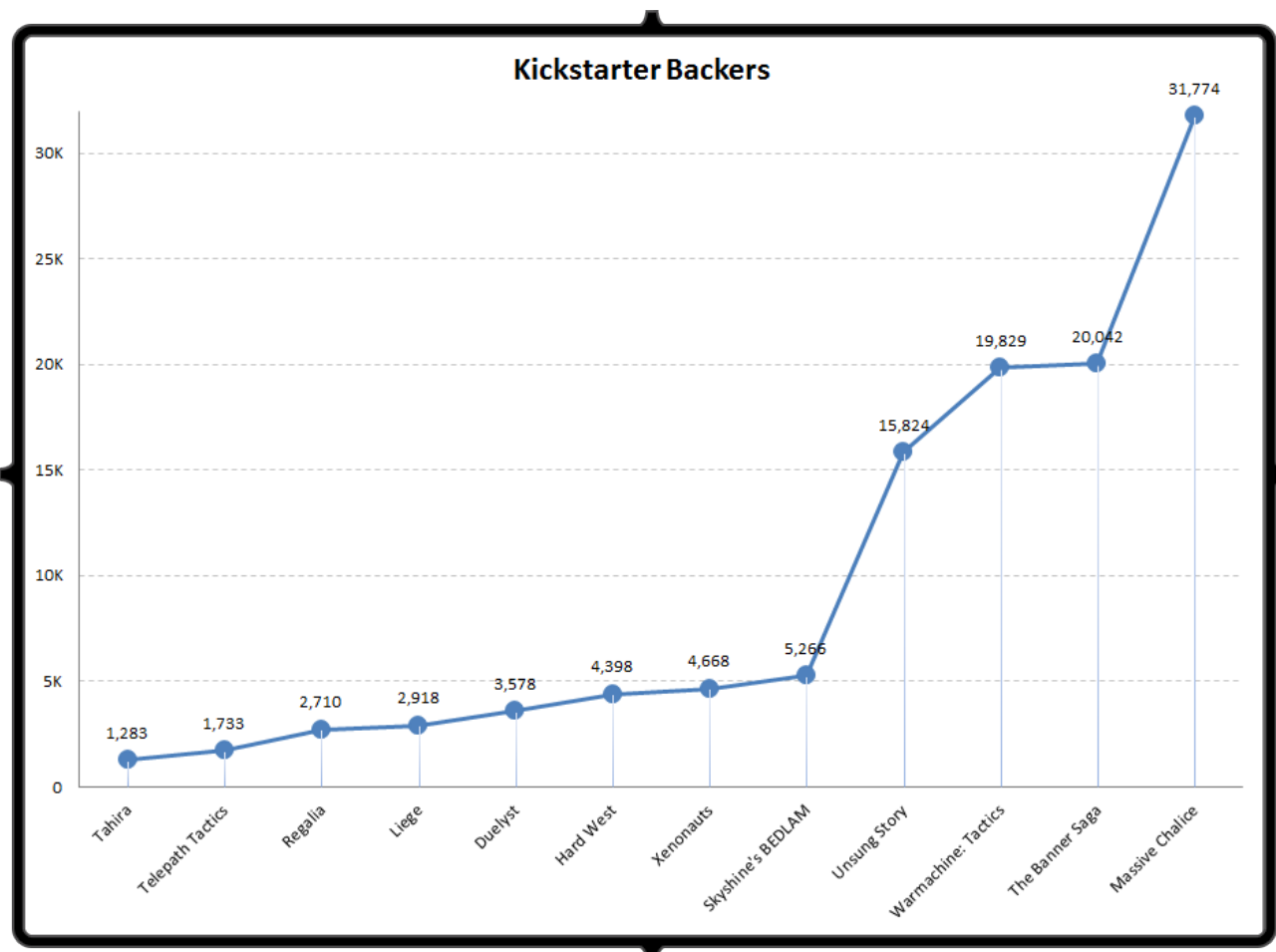
Trudy's Mechanicals was designed with potential for various additional components. The engine supports a localization system, contains multiplayer hooks that work in unison with the unit design, and the backend architecture facilitates porting via wrappers around various audio, visual, and input libraries.

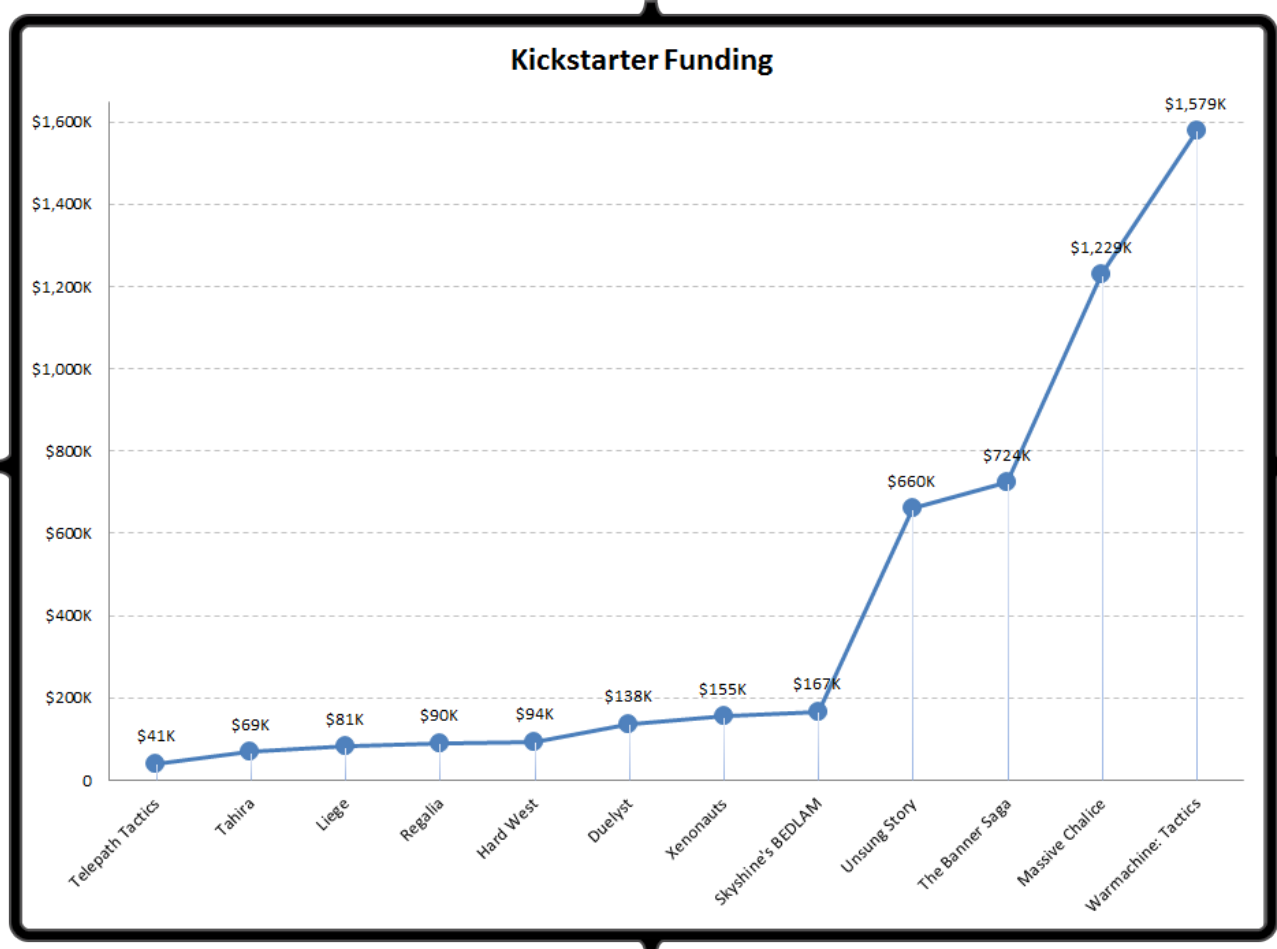
These are not necessarily features that must go into the game on launch, but could help the game's overall performance. Incubator Games will look to potential publishing partners for prioritization of these elements, as well as additional voice overs and other features such as a more dynamic camera system, with the caveat that they would require extra development time and resources.



## Additional Funding

Crowdfunding has slowed down in recent months, but remains a potential avenue for offsetting development costs. Below are two charts showing the amount of backers that supported various tactics titles on Kickstarter, and the amount of money they raised.





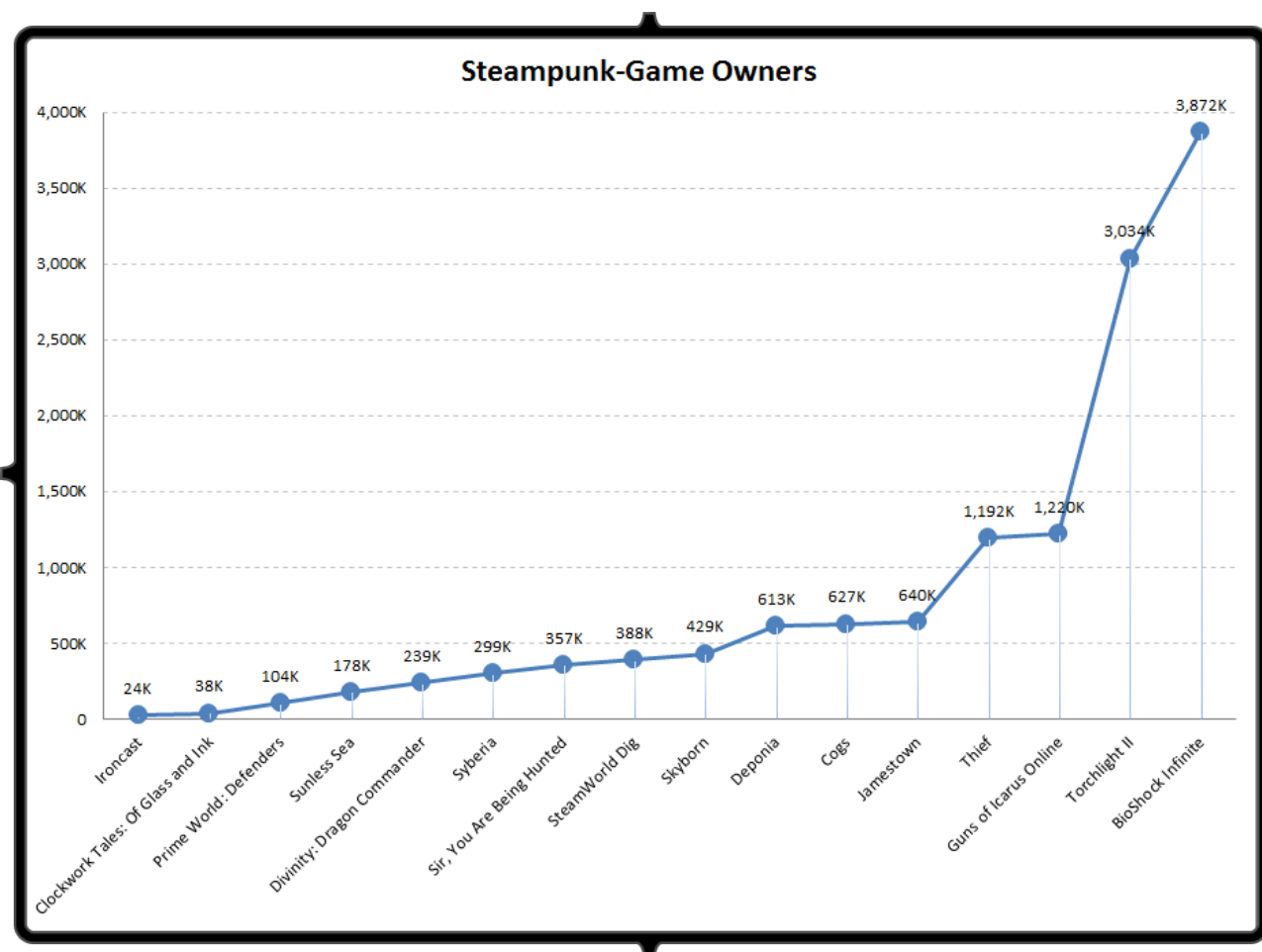
Based on the production values, fan bases, and completion percentages of these titles, a realistic baseline goal for a Trudy's Mechanicals Kickstarter would be **4,500** backers and **\$100,000** in raised funds. This would not be enough to cover the remaining development costs, but would greatly alleviate the requirements even after Kickstarter fees (roughly 10% total: 5% Kickstarter cut, and a 3%-5% payment fee).

However, due to the relatively high production values of Trudy's Mechanicals, the opportunity to reach out to over 100 Kickstarters that Incubator Games has personally backed (including all the tactics games mentioned above), and the game's Steampunk setting, a Kickstarter campaign could prove a lot more successful. Steampunk has shown to be a viable draw for such crowdfunding projects as Hullabaloo (<https://www.indiegogo.com/projects/hullabaloo-steampunk-animated-film#/>) and Steampunk Rally (<https://www.kickstarter.com/projects/roxley/steampunk-rally>), and that aspect could help bring a Trudy's Mechanicals campaign closer to **10,000** backers and **\$200,000+** in funding.

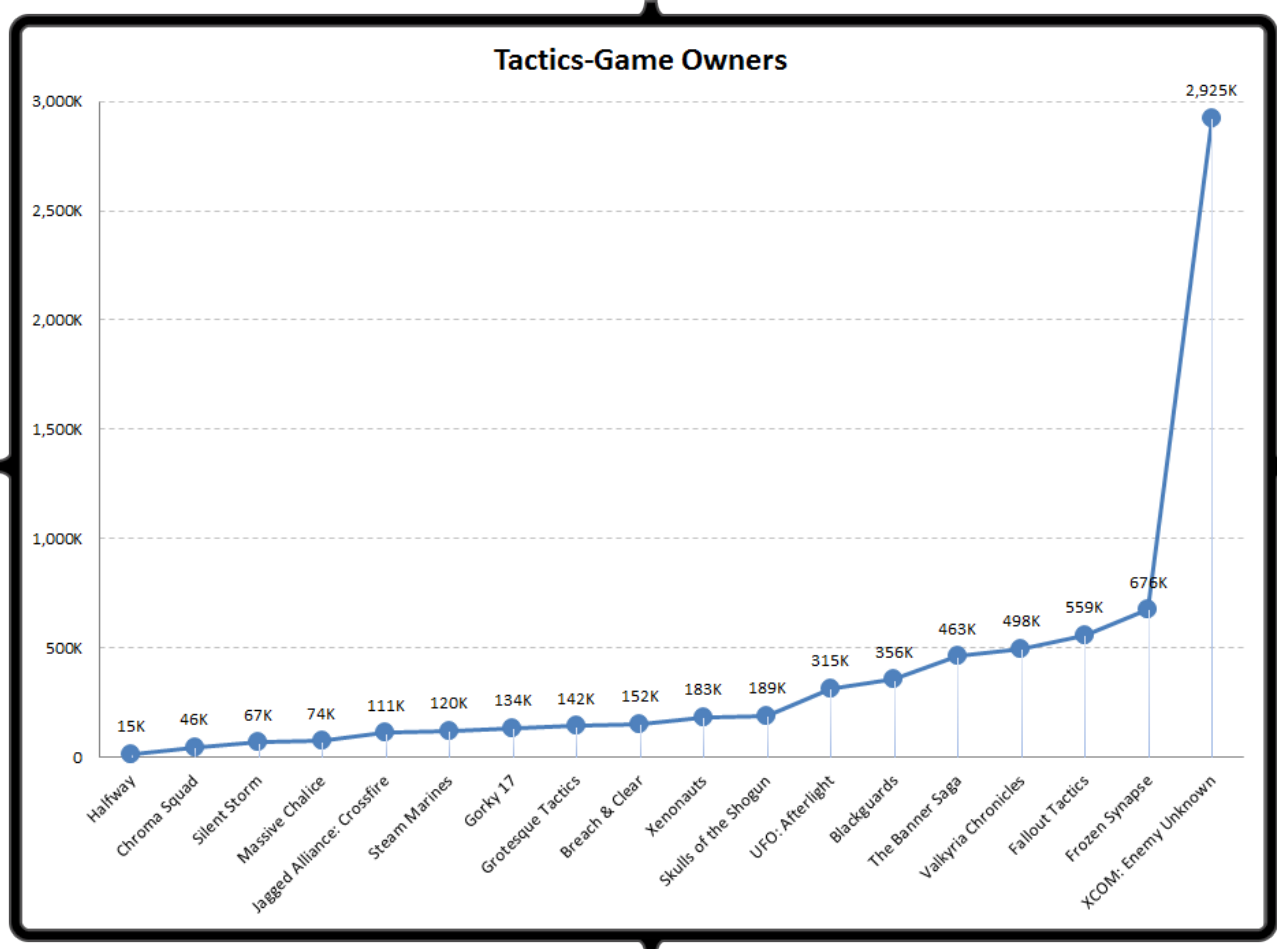


## Projected Sales

Based on the data reported by SteamSpy, Steampunk games of all genres have enjoyed tremendous success on the PC/Mac/Linux platforms. Even relatively modest titles such as COGS and Jamestown sold over **600,000** copies, and other adventure, puzzle, simulation, and platformer games have been shown to benefit from a Steampunk aesthetic.



Turn-based strategy games have also seen a fair amount of success on Steam. Despite often relying on a more primitive presentation than Trudy's Mechanicals and rarely benefiting from an established IP, the sales of these titles have reached up to **700,000** units.



Based on the title-quality and sales data of both Steampunk and turn-based strategy games, we estimate that Trudy's Mechanicals could reach up to **500,000** players. While we consider our baseline to be **200,000** users, which would still be profitable to both the developer and the publisher, a successful marketing campaign could bring it even beyond the **500,000** mark.

As the project presents very little risk due to its completion percentage but a high sales-ceiling stemming from its production values and Steampunk aesthetic, we hope to team up with a publisher who recognizes the potential of Trudy's Mechanicals and can help us fulfill it.