

# UNDEAD

## LABS

## Shipping State of Decay 2

Anecdotes and ramblings from Jørgen Tjernø,  
a programmer at Undead Labs

# About me

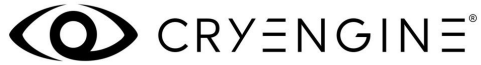
- Norwegian born & raised
- Entered games industry in 2013
- Worked on NVIDIA graphics driver, Steam, Dota 2, Planetary Annihilation, and State of Decay 2, among others
- Currently an engine, tools, and gameplay programmer at Undead Labs
- Contributor to Unreal Engine 4

## State of Decay 2

- Developed by Undead Labs, a wholly owned subsidiary of Microsoft
- Shipped in May of 2018
- Over 4 million unique players & 6 billion poor zombies murdered
- More than 4 years in development
- Team size grew from ~30 to ~70



# The three engines of (State of) Decay



# The many facets of open world games

- Relying on *magic*
- The massive problem space
  - More than 500 individual missions to play
  - A total area of over 40km<sup>2</sup> spread across 3 maps
  - Characters generated from over 1,300 different traits and 36 cultural backgrounds

# The many facets of open world games

- “*Onion development*” -- start with a core and layer around it
- Invest in automation -- tests, verifiers, validators, et cetera
- The right way to do something has to be the easy (or ideally, only) way to do it
- Actionable error reporting, and **act on it**
- Hard limits

# (More) common challenges

- Multiplayer
  - Testing
  - Agency vs isolation
- Cross-platform
  - Input & UI
  - Performance

Questions?

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