Designing systemic crowd events on Assassin's Creed Unity

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GAME DEVELOPERS CONFERENCE®
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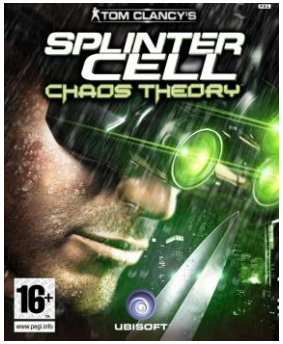
GAME BOY ADVANCE
Rayman 3
Ubi Soft

GAME BOY ADVANCE
Prince of Persia
THE SANDS OF TIME
Nintendo
UBISOFT


TOM CLANCY'S
SPLINTER CELL
CHAOS THEORY
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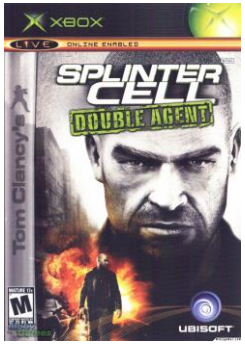
XBOX
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DOUBLE AGENT
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Wii
Shaun White
Snowboarding
ROAD TRIP
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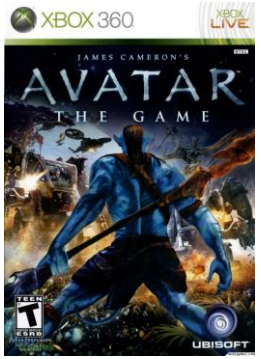
XBOX 360
JAMES CAMERON'S
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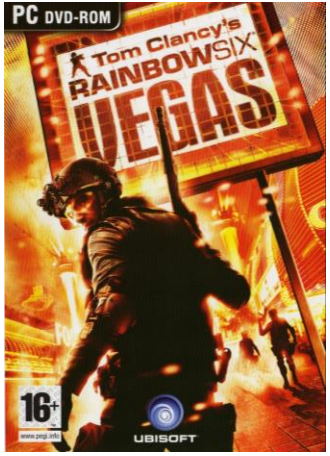
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Tom Clancy's
RAINBOW SIX
VEGAS
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XBOX 360
TOM CLANCY'S
SPLINTER CELL
CONVICTION
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PS3
PlayStation.Network
ASSASSIN'S CREED
REVELATIONS
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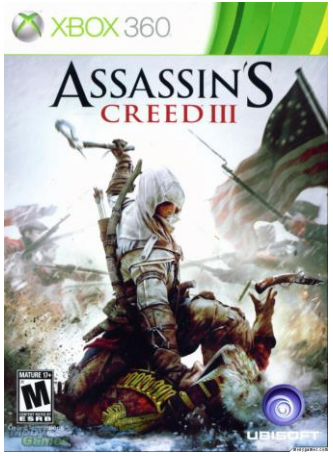
XBOX 360
ASSASSIN'S CREED III
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PS4
ASSASSIN'S CREED
UNITY
SPECIAL EDITION
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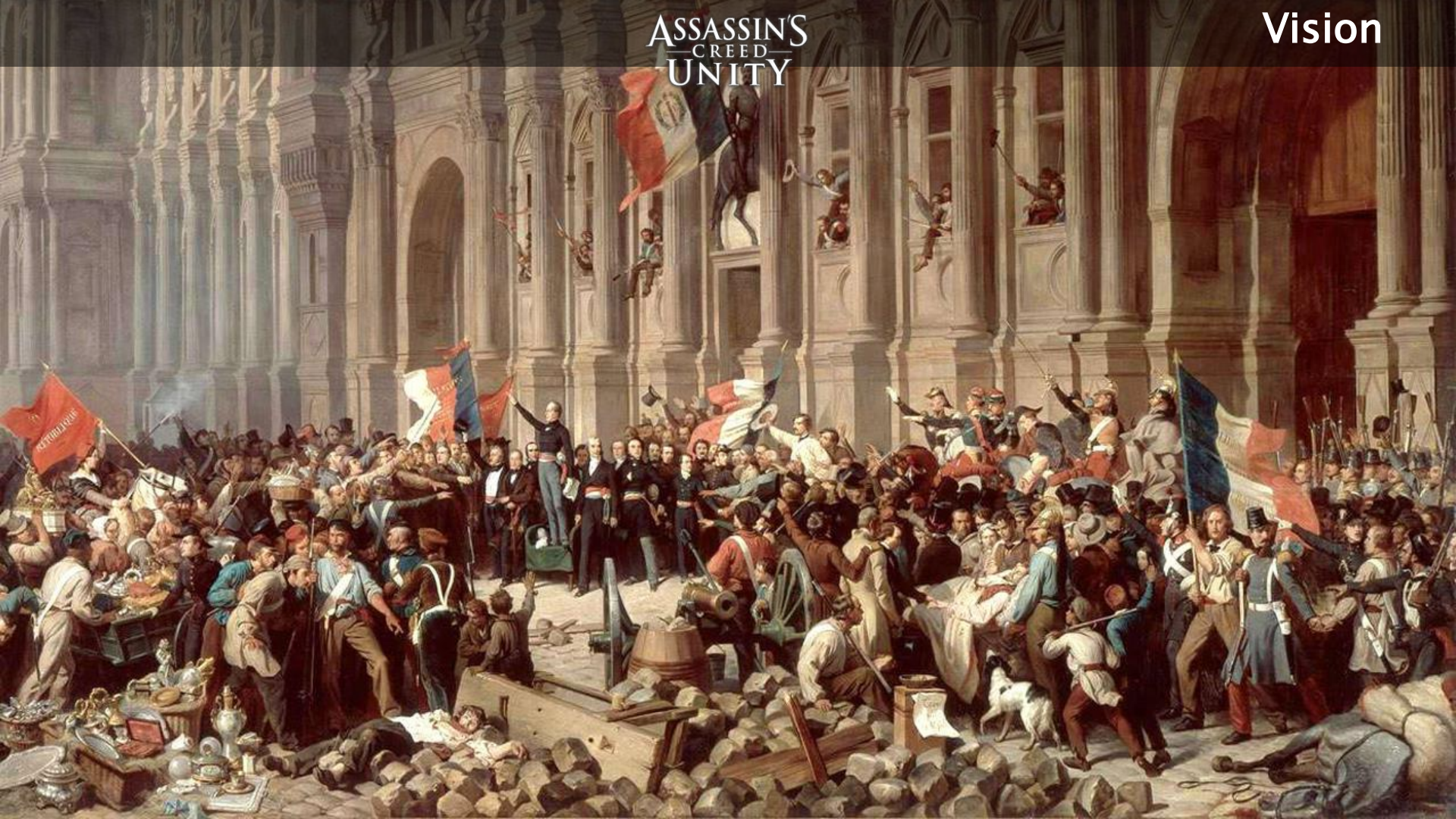
ASSASSIN'S
CREED
UNITY


ASSASSIN'S
CREED
UNITY
Vision

Design Intentions

- Make Paris live & breathe ON IT`S OWN.
- Allow Emergent Gameplay ALL OVER Paris and IN MISSIONS.

NPCs Ecosystem

ASSASSIN'S CREED UNITY

Extremist Faction

Ally Faction

Guard Faction

Civilian Faction

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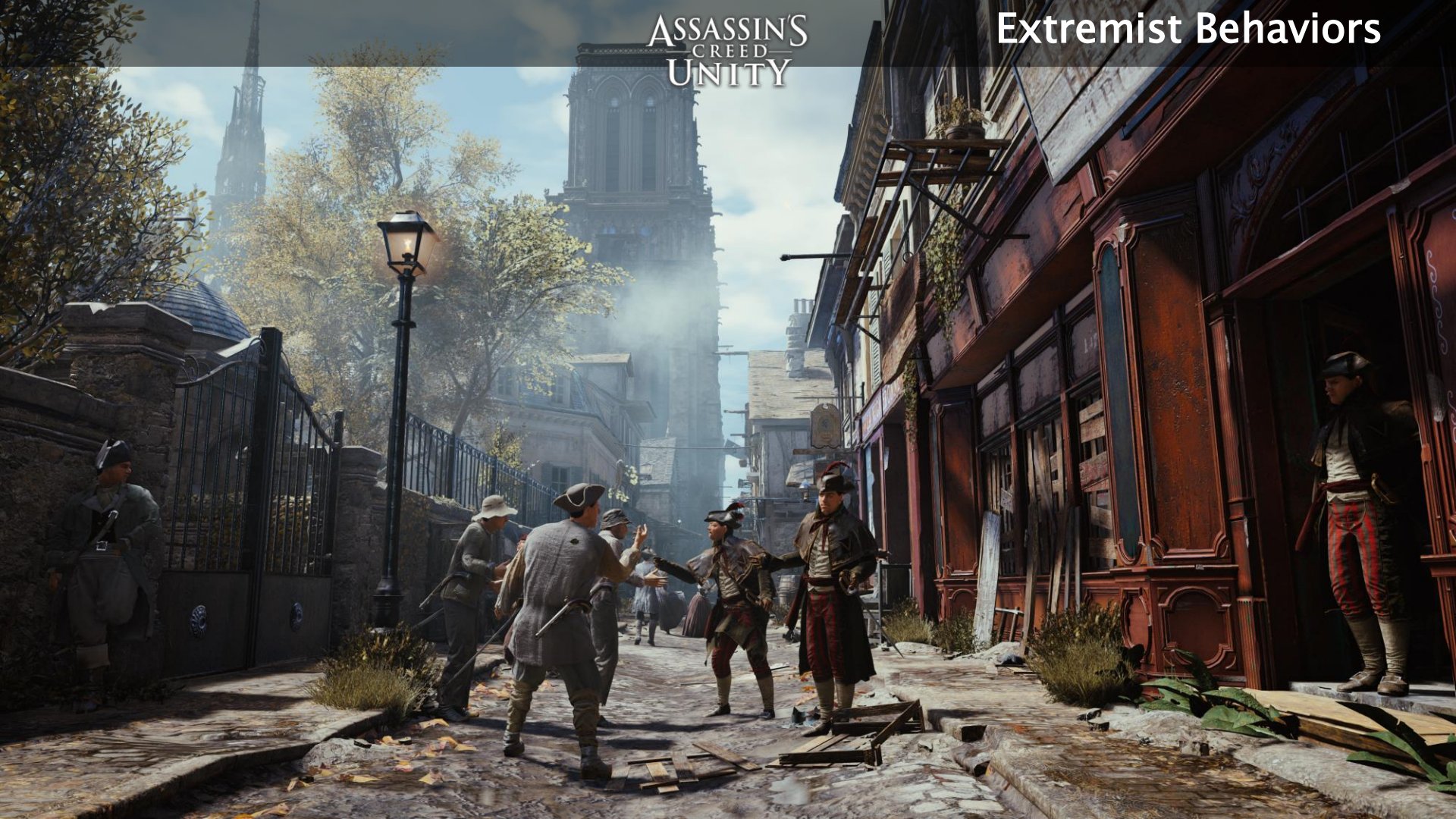
Ally Faction

Extremist Faction



Extremist Behaviors

Royal Guard Faction

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Royal Guard Behaviors
BACCHUS

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Royal Guard Behaviors

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Royal Guard Behaviors

Ecosystem: Lure Extremists towards Guards to get rid of them.

Civilian Faction

Crowd Life Systems

Wanderers

Object Carriers

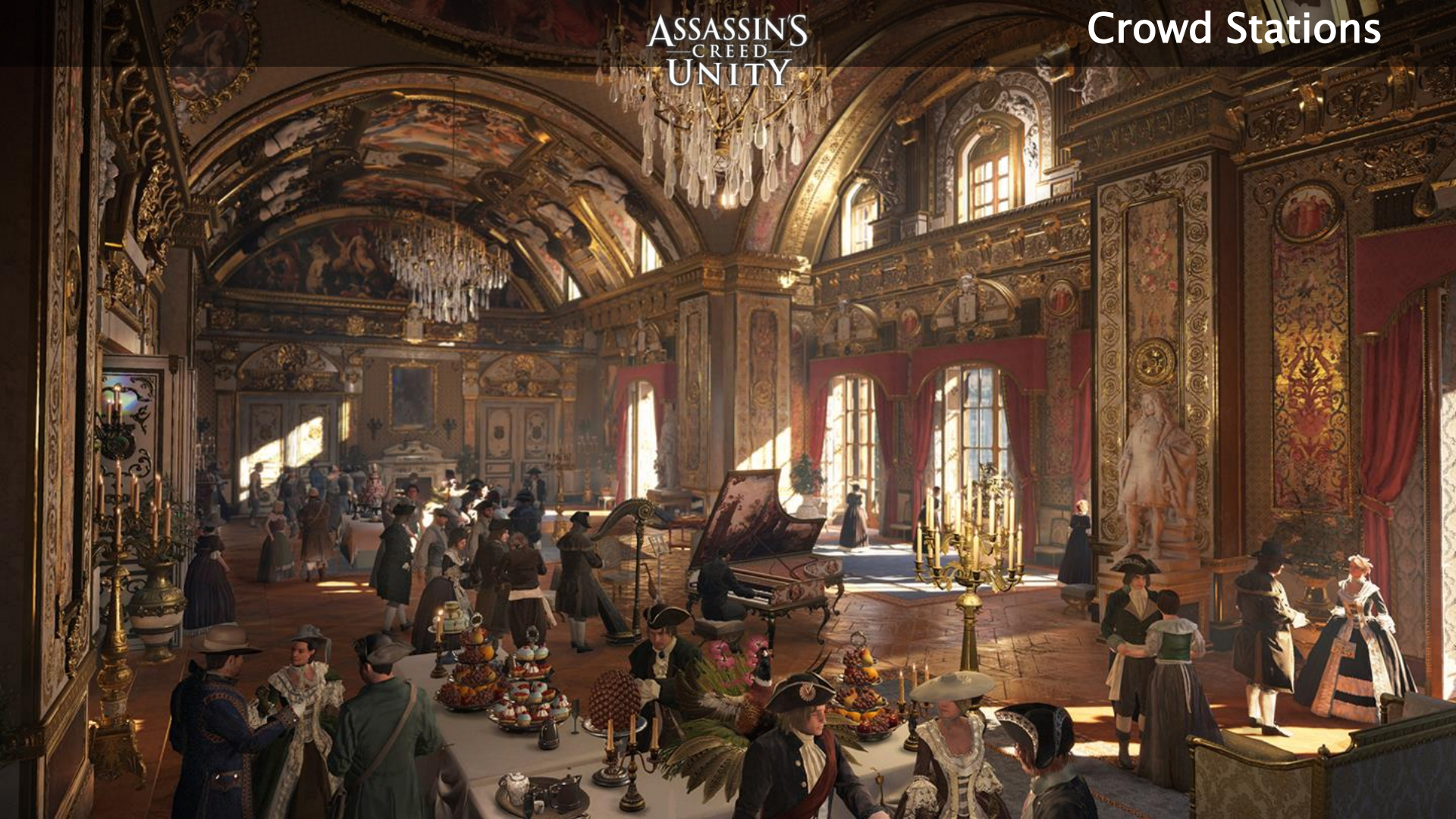
Crowd Stations

Crowd Stations

Crowd Stations

Crowd Stations

Crowd Stations



Massive Crowd

Disclaimer: The following presents
Massive Crowd during it's development.

AI Interactions

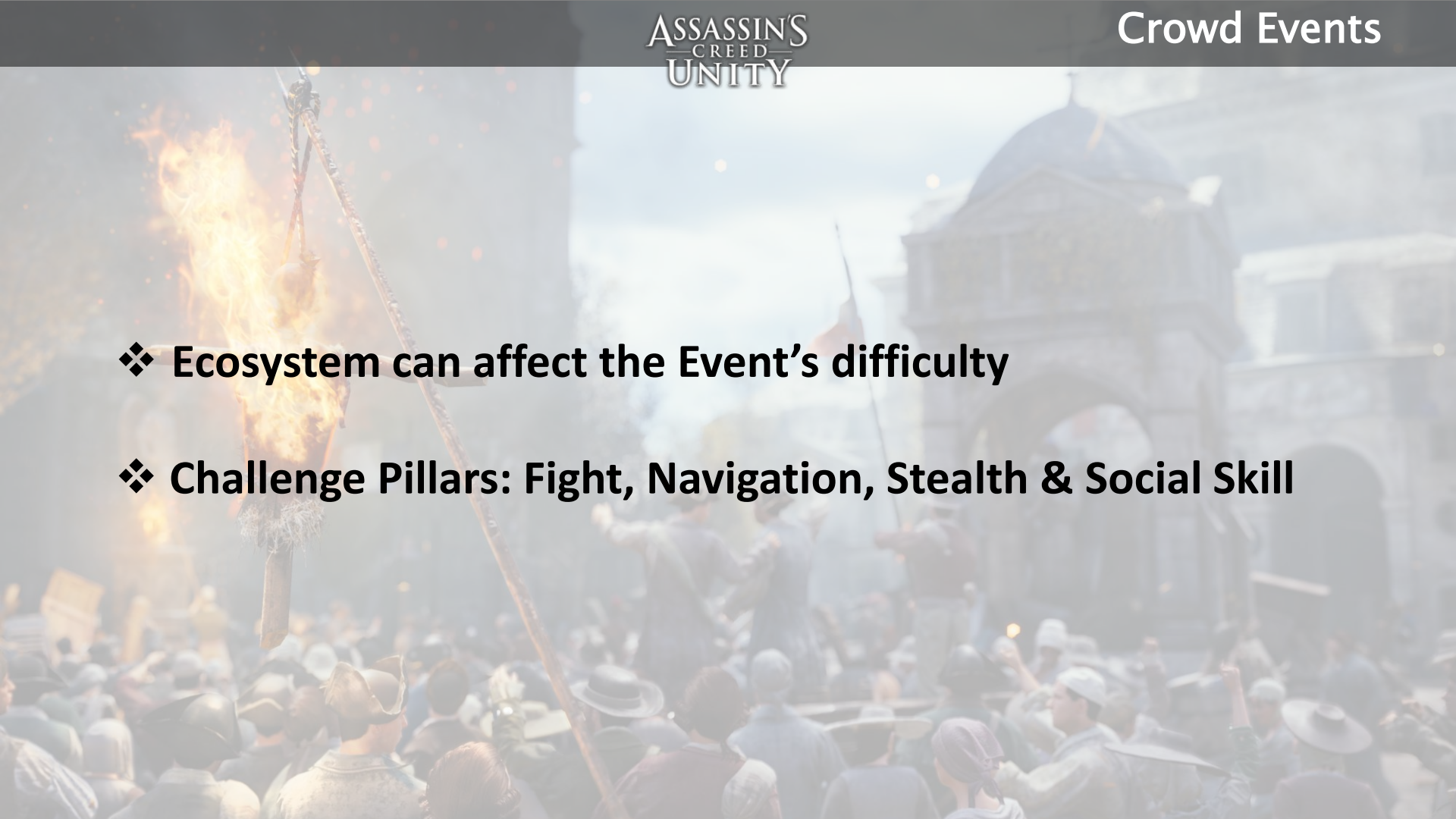
AI Interactions

Crowd Life Gym

Crowd, AI Interactions, Object Carriers, Crowd Events

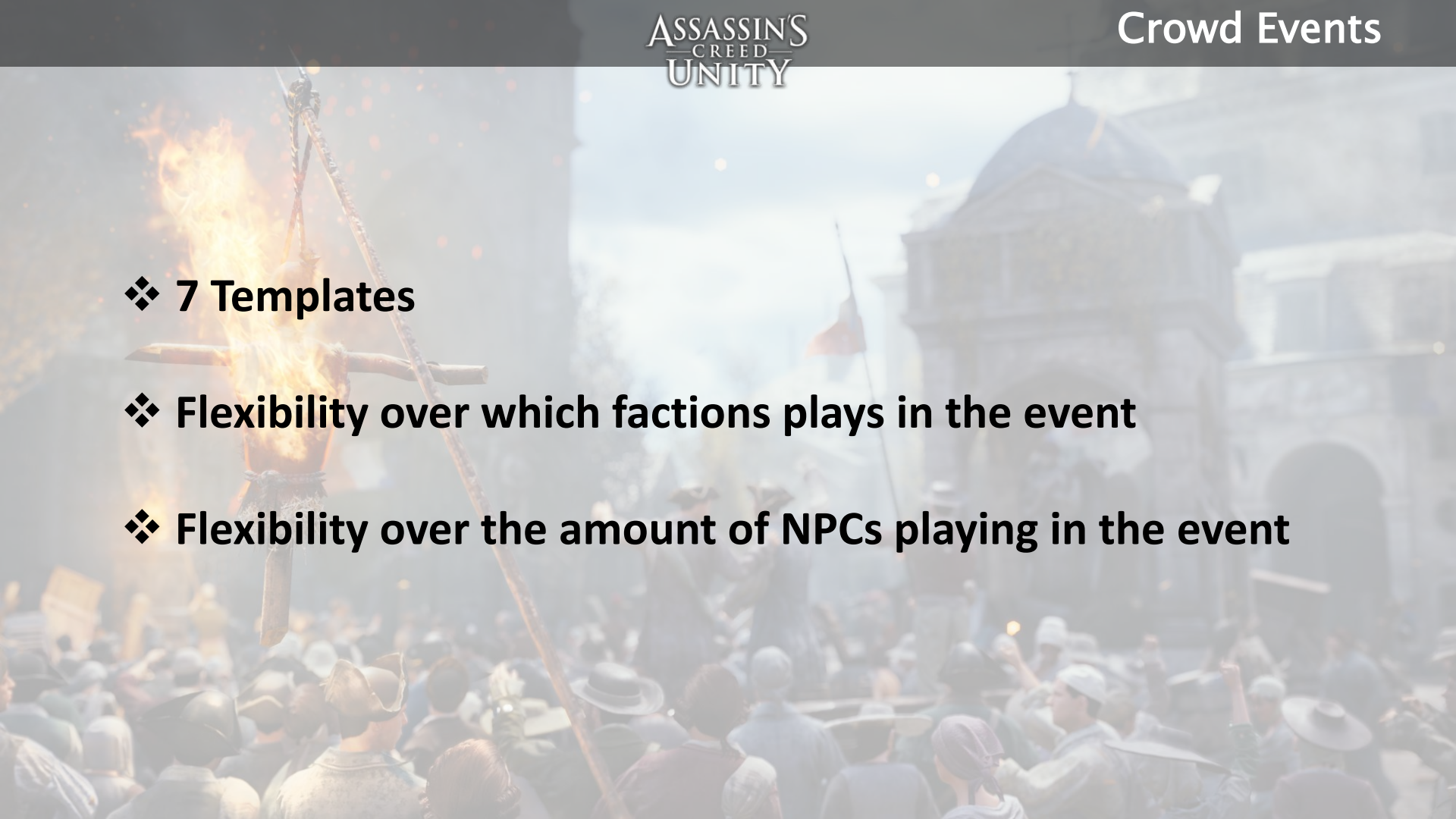
Disclaimer: The following sequences presents Crowd Life during Development.

Crowd Events



- Ecosystem can affect the Event's difficulty
- Challenge Pillars: Fight, Navigation, Stealth & Social Skill

Crowd Events



- 7 Templates
- Flexibility over which factions plays in the event
- Flexibility over the amount of NPCs playing in the event

Tackle the Thief

ASSASSIN'S CREED UNITY
Catch & Kill the Criminal
Kill the criminals

Kill the Criminals

ASSASSIN'S
CREED
UNITY
Executions

ASSASSIN'S
CREED
UNITY
Protect Civilians

ASSASSIN'S
CREED
UNITY
Stealth Kill the Messenger

ASSASSIN'S
CREED
UNITY
Scare Away the Bullies
BRASSERIE

ASSASSIN'S
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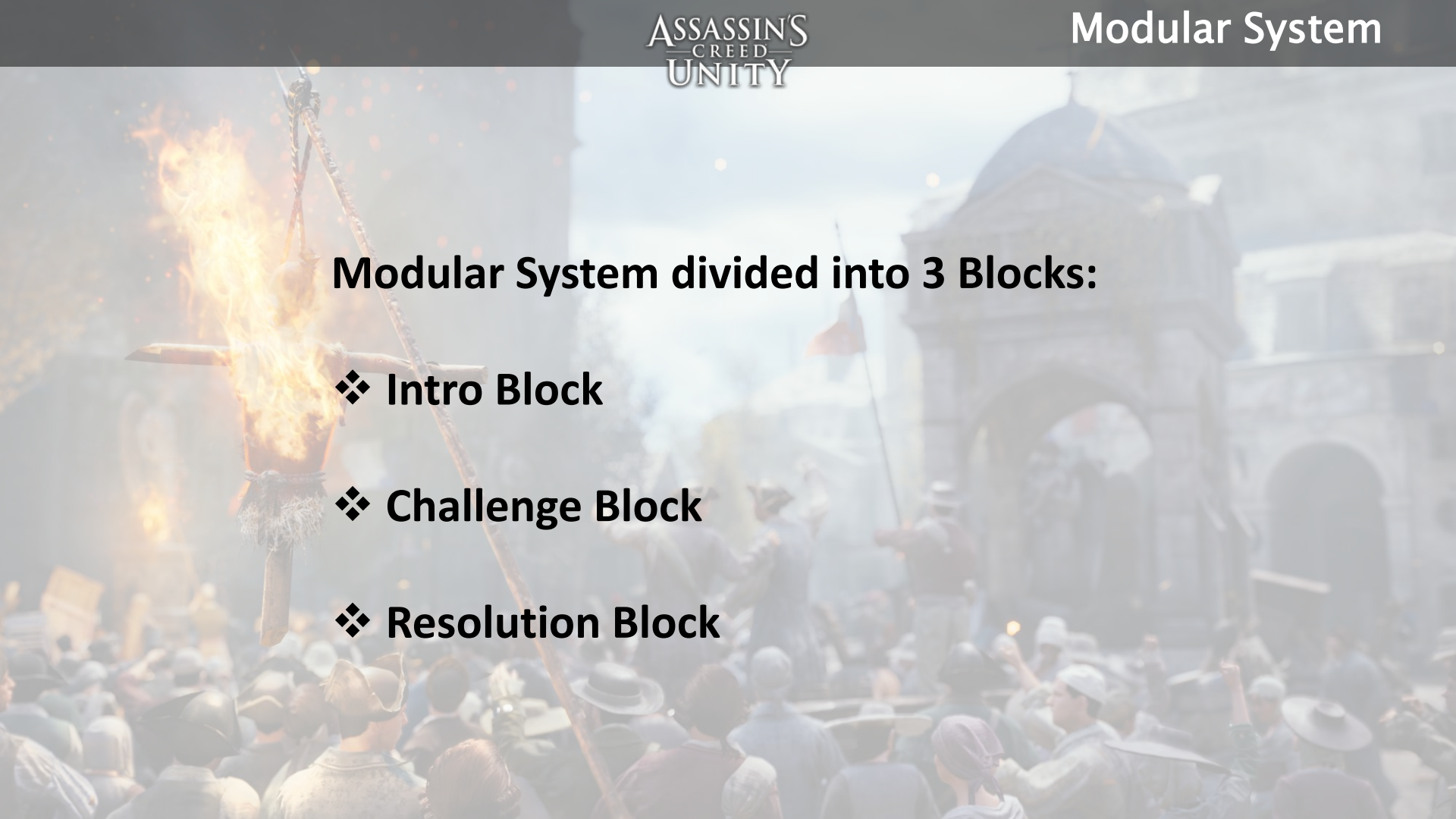
UNITY
Help the Beggars

Catalyst Effect on the Ecosystem

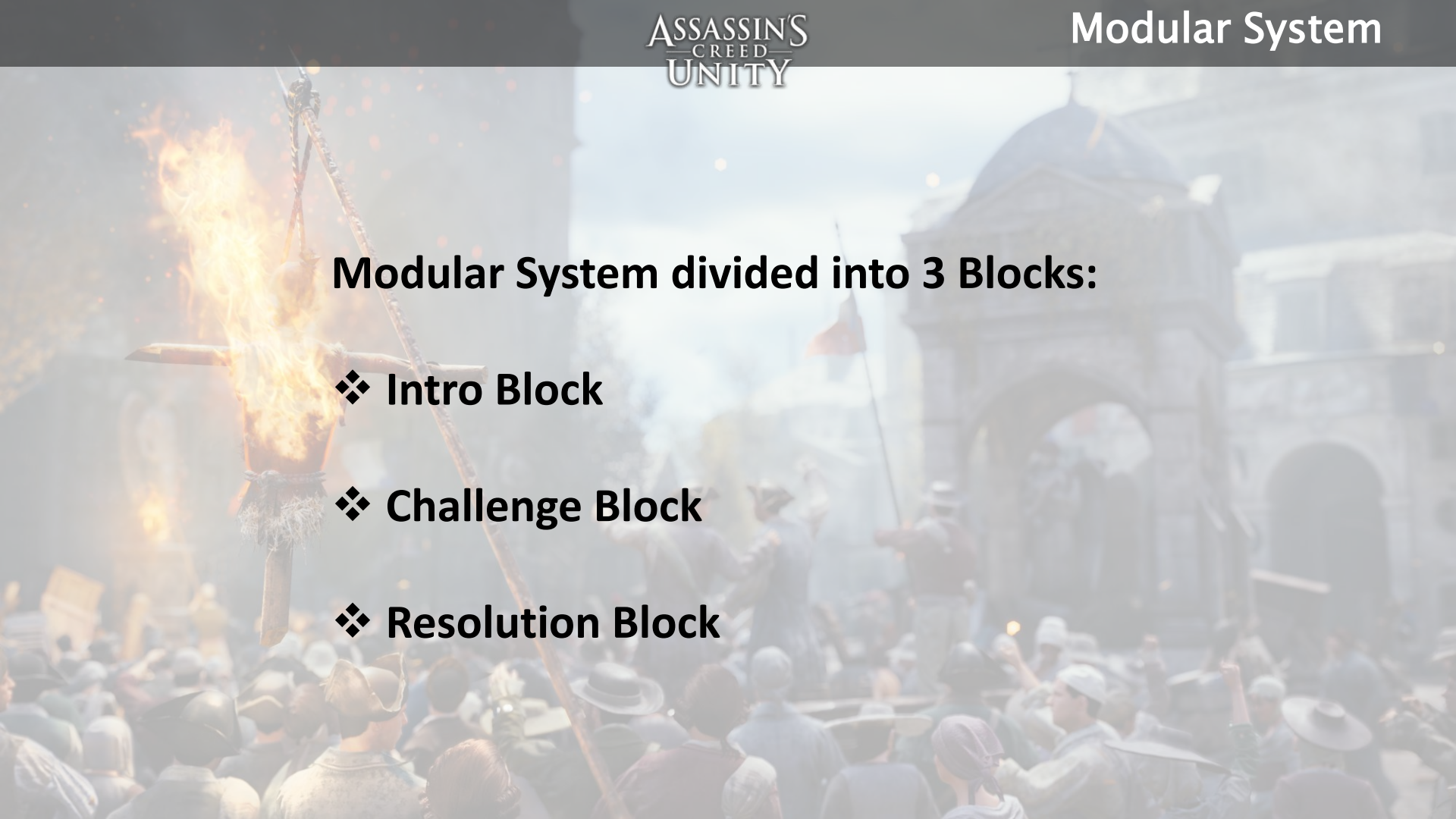
Catalyst Effect on the Ecosystem

Murder event inside massive crowd



Modular System divided into 3 Blocks:

- **Intro Block**
- **Challenge Block**
- **Resolution Block**

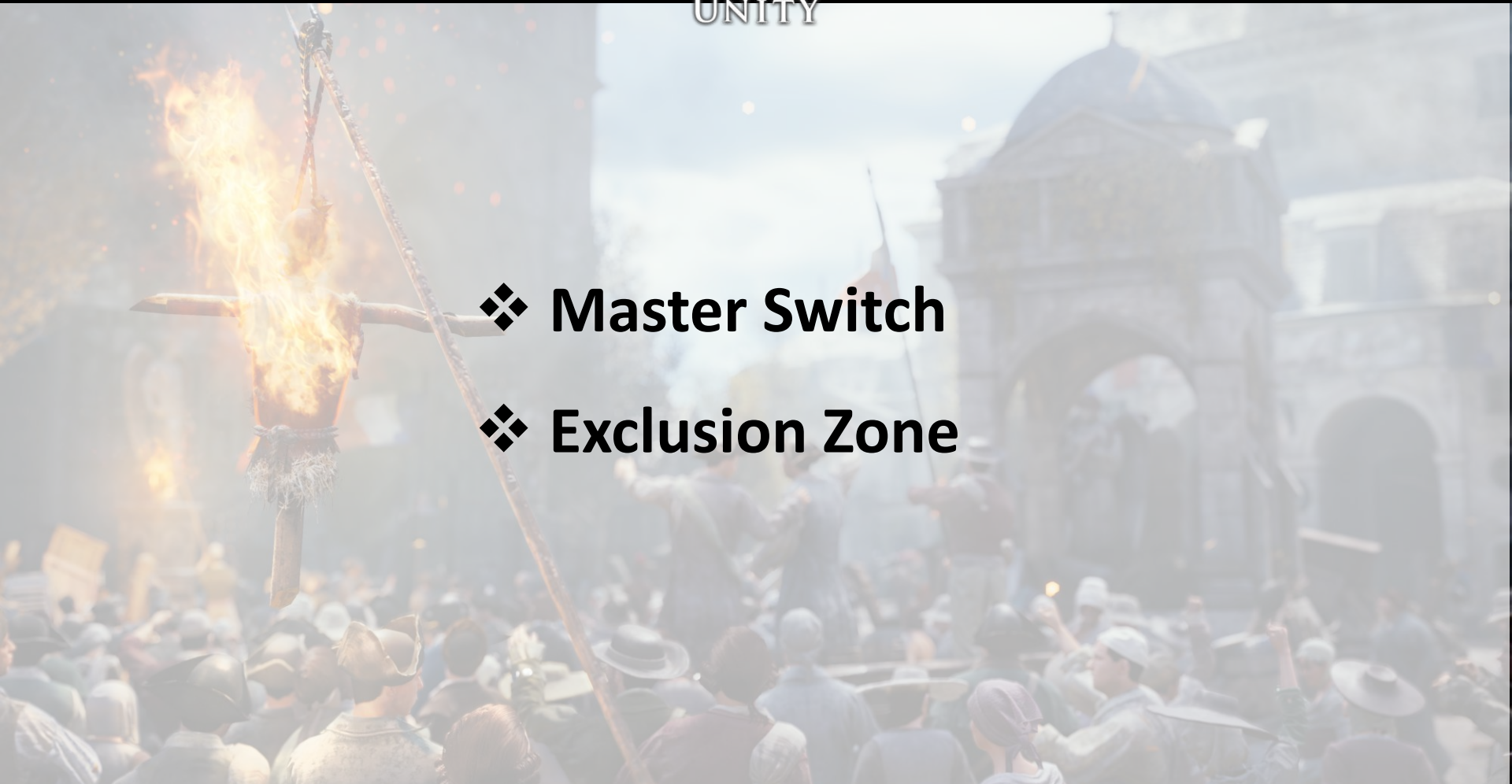


Modular System divided into 3 Blocks:

- **Intro Block**
- **Challenge Block**
- **Resolution Block**

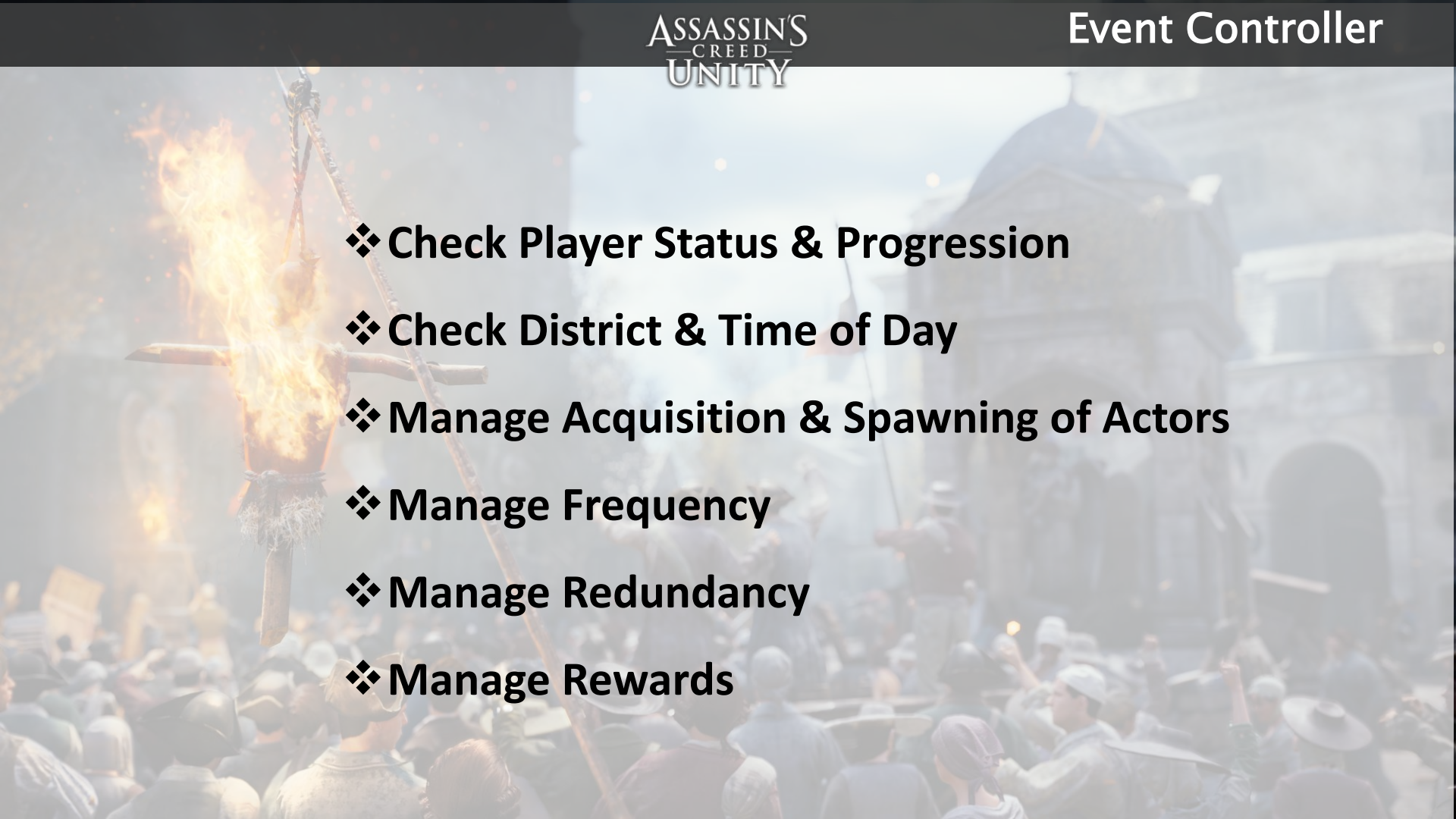
- Conceptually exciting
- Hard to embrace

Controlling Emergence



- Master Switch
- Exclusion Zone

Event Controller



- Check Player Status & Progression
- Check District & Time of Day
- Manage Acquisition & Spawning of Actors
- Manage Frequency
- Manage Redundancy
- Manage Rewards

EventController: Started (M)
CrowdEventCreator : SetupCrowdEvent - Wait
CrowdEventHandler: idle - Waiting for events.
Crowd Events running:
- None
- None
- None
- None

Spawning

Spawning Location

EventController: Started (M)
CrowdEventCreator: Idle 10.67
CrowdEventHandler: idle - Waiting for events.
Crowd Events running:
- CE_Hostage1_2Aggressors_1Ally (Dynamic)
- None
- None
- None

EventController: Started (M)
CrowdEventCreator: Idle 4.97
CrowdEventHandler: idle - Waiting for events.
Crowd Events running:
- CE_Hostage1_2Aggressors_1Ally (Dynamic)
- None
- None
- None

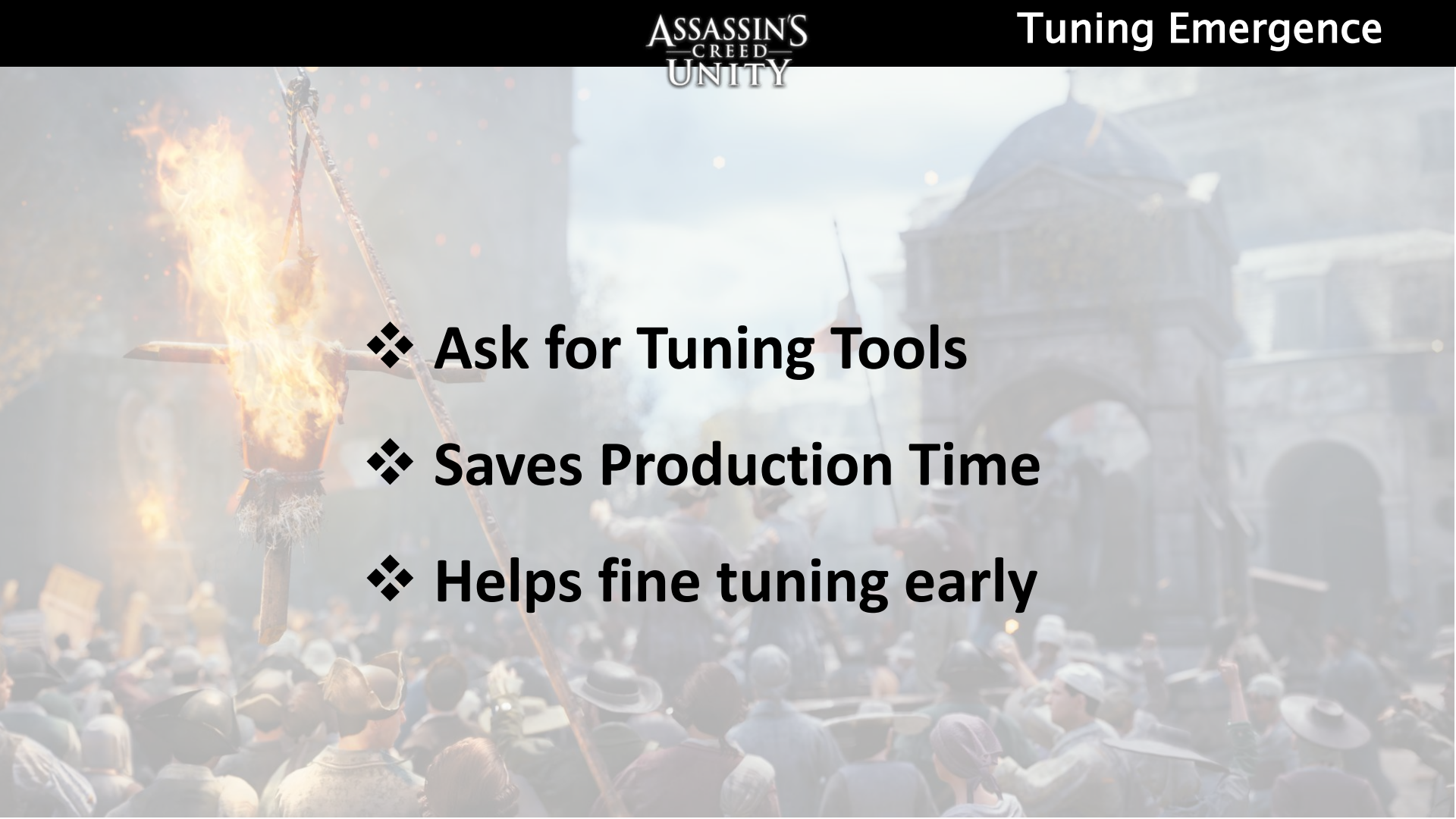
Spawning

EventController: Started (M)
CrowdEventCreator : SetupCrowdEvent - Wait
CrowdEventHandler: idle - Waiting for events.
Crowd Events running:
- CE_Hostage1_2Aggressors_1Ally (Dynamic)
- None
- None
- None

[0]
EventController: Started (M)
CrowdEventCreator : SetupCrowdEvent - TryingToStartCrowdEvent
CrowdEventHandler: Idle - Waiting for events.
Crowd Events running:
- None
- None
- None
- None
Radius: 0.9266

[0]
EventController: Started (M)
CrowdEventCreator: Idle 6.70
CrowdEventHandler: idle - Waiting for events.
Crowd Events running:
- None
- None
- None
- None
Radius: 0.1189

Tuning Emergence



- Ask for Tuning Tools
- Saves Production Time
- Helps fine tuning early

EventController: Started (M)
CrowdEventCreator: Idle 8.08
CrowdEventHandler: idle - Waiting for events.
Crowd Events running:
- CE_Scare_01_4CivCoward_1Baker (Dynamic)
- None
- None
- None
Event Creation Log:
- Fail - AI Condition - TimeOfDayCondition (7.79)
- Fail - AI Condition - DistrictCondition (8.39)
- Fail - AI Condition - TimeOfDayCondition (8.99)
- Fail - AI Condition - TimeOfDayCondition (9.59)
- Fail - Too many active crowd events within Analyzer radius (10.27)
RUE NEUVE NOTRE DAME
35

EventController: Started (M)
CrowdEventCreator: Idle 8.08
CrowdEventHandler: idle - Waiting for events.
Crowd Events running:
- CE_Scare_01_4CivCoward_1Baker (Dynamic)
- None
- None
- None
Event Creation Log:
- Fail - AI Condition - TimeOfDayCondition (7.79)
- Fail - AI Condition - DistrictCondition (8.39)
- Fail - AI Condition - TimeOfDayCondition (8.99)
- Fail - AI Condition - TimeOfDayCondition (9.59)
- Fail - Too many active crowd events within Analyzer radius (10.27)
RUE NEUVE NOTRE DAME
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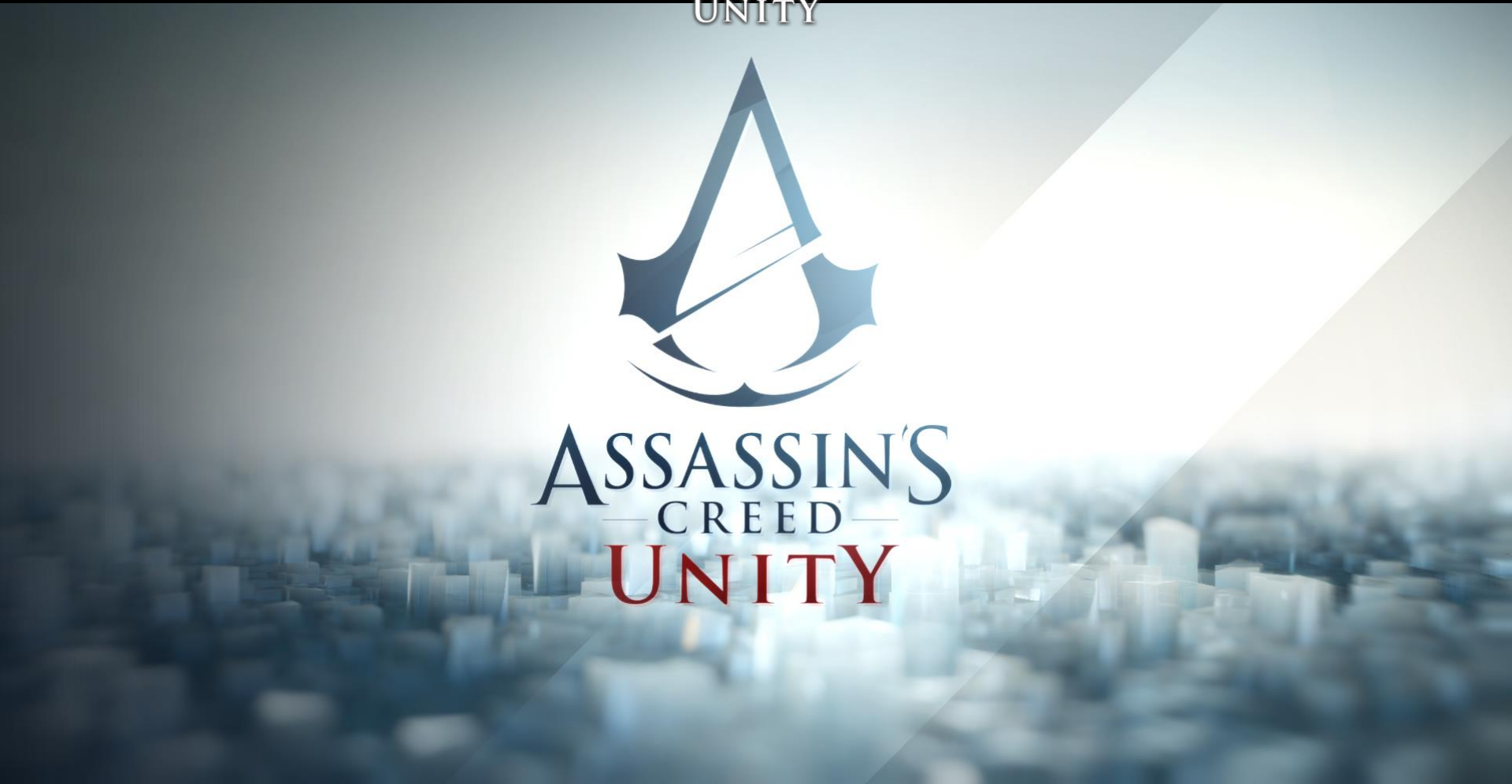
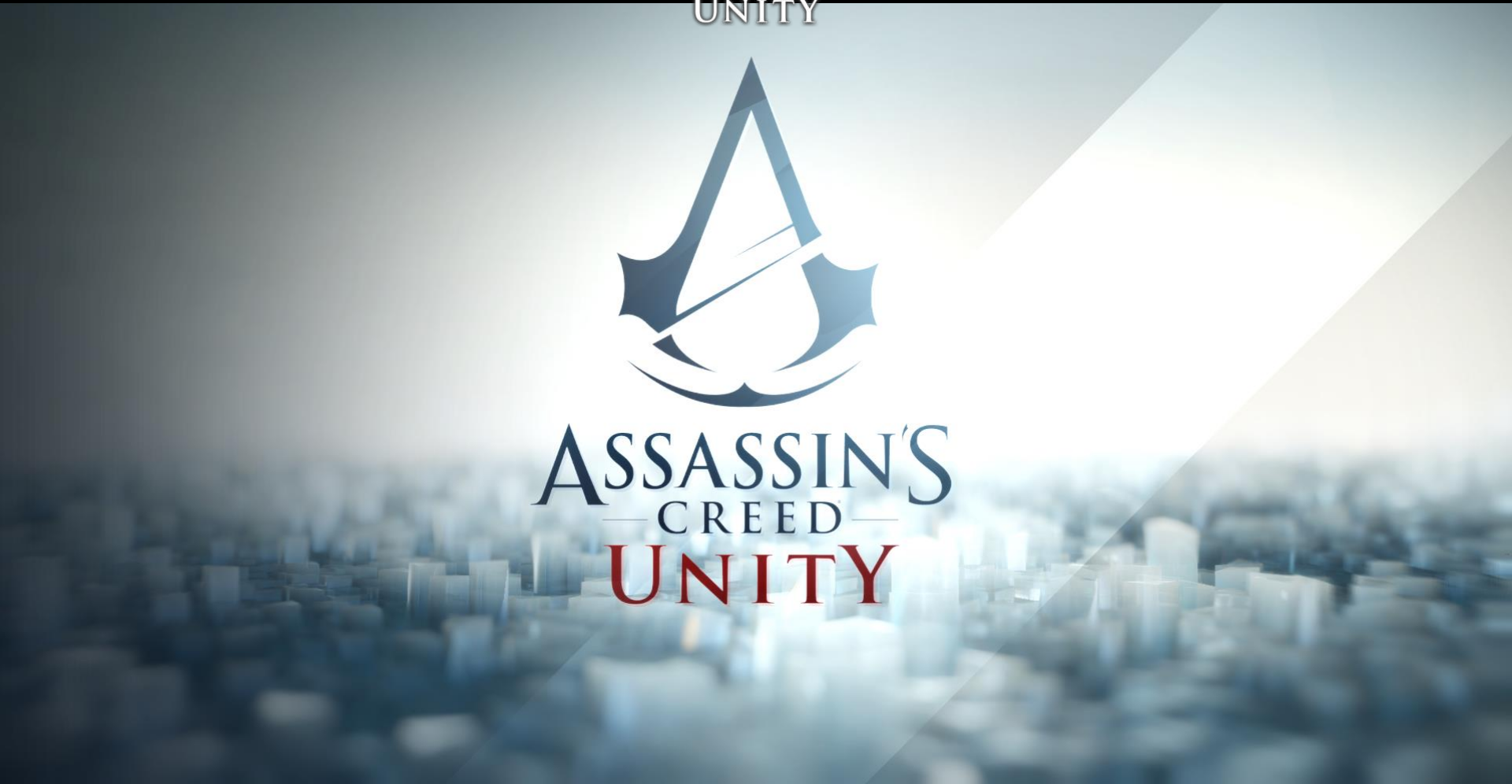
Avenues of improvement

- Diversity of Challenges
- Use Crowd Stations in Intro Blocks
- Push Acquisition

Avenues of improvement

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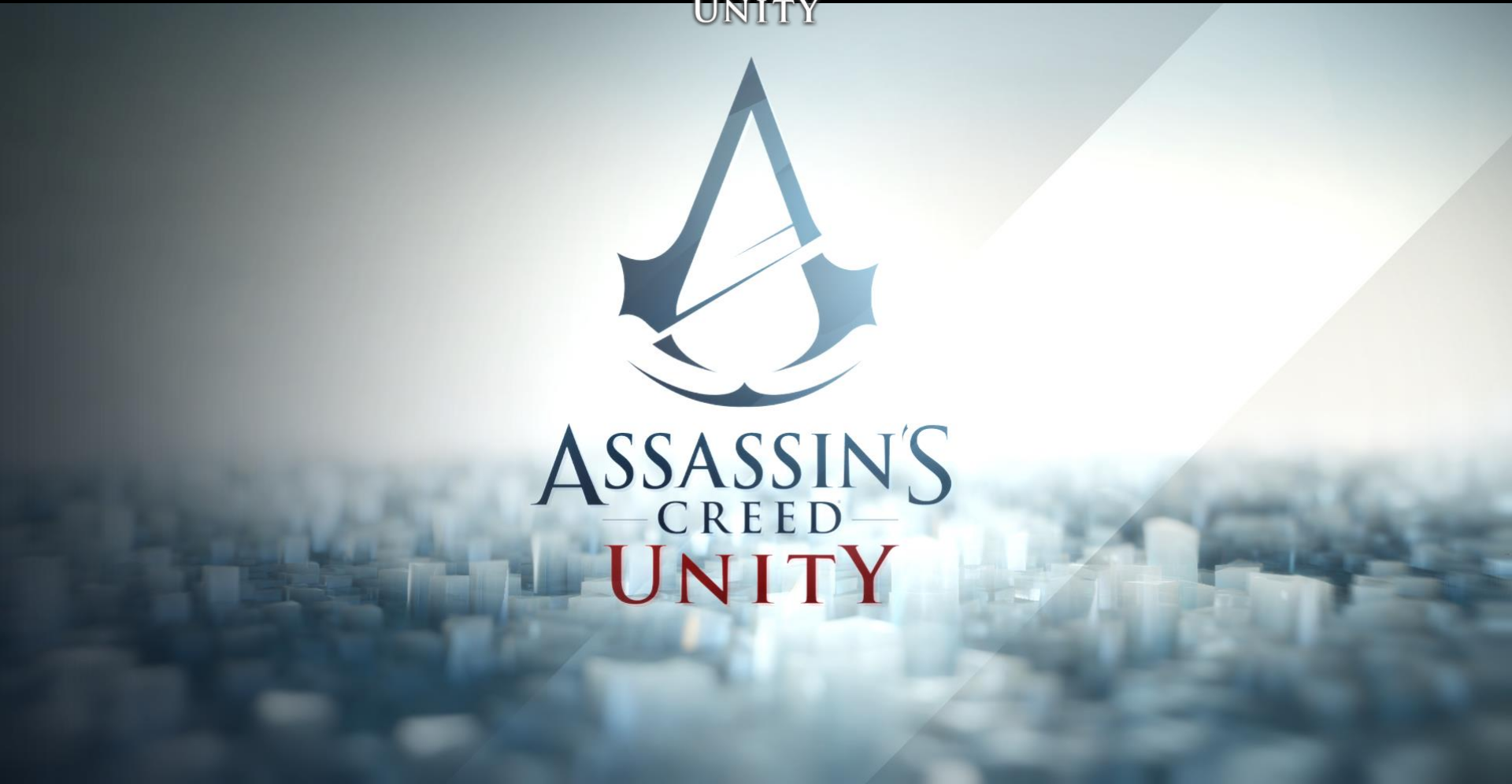
UNITY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