

# What went right

 [gamasutra.com/view/news/234421/Postmortem\\_Monolith\\_Productions\\_Middleearth\\_Shadow\\_of\\_Mordor.php](http://gamasutra.com/view/news/234421/Postmortem_Monolith_Productions_Middleearth_Shadow_of_Mordor.php)

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*Middle-earth: Shadow of Mordor* shipped worldwide beginning Sept. 30, 2014. *Shadow of Mordor* was an ambitious game around which we built our current team here at Monolith Productions, and it was the first time many of us had worked together.

For the majority of the team it was our first third person, open world action game not to mention our first “new gen” title.

This combination of factors made it an enormously educational experience seeing how far we can improve. The following list is a small sample of our experience gained over the last three years in development.

The benefit of hindsight and the fact that the end result turned out quite well makes some of these wins seem clearer and more obvious than they did at the time.

## 1. The Nemesis System

There were two main goals which drove our focus on the Nemesis System. The first was a commitment to creating systems which empowered players to create and share their own stories. The second was for us to leverage the new generation hardware through our innovation.

We played to Monolith Productions’ strengths as a team and a studio in crafting innovative Artificial Intelligence, for example in *F.E.A.R.* With *Shadow*, we targeted our efforts on having the NPCs react and respond to the player, the environment and each other. Focusing on this from the outset informed many of the design decisions up to and including our core innovation revolving around AI and NPC behavior.



Bringing this system to life was a result of very strong cross-discipline collaboration. There was no part of the team not strongly involved in the Nemesis System – writing and VO, AI, animation and facial animation, cameras, game design, UI and level design. With all the pieces in place, Character Art did an amazing job realizing our Uruks as a rich set of unique and hideous snowflakes.

As soon as the game launched, we began to see players creating and sharing their own videos and stories of their experience of the Nemesis System and how much they loved to hate their enemies. Giving players the tools to create and share their personal stories is going to be a key pillar of all our work going forward.

## 2. Core Gameplay and Controls

We were determined to innovate our systems and AI. It was critical that the core gameplay, the controls and the camera supported the players intention at all times. We aimed for controls to be immediately accessible, if not “pick up and play,” given the depth of options for melee, stealth, ranged and movement gameplay.

Our goal was to match the “best in class” core gameplay quality of the genre we were entering, which we clearly identified as the *Arkham* series by Rocksteady. *Arkham* is also published by Warner Bros. Interactive Entertainment and we wanted players to perceive that we were trying to emulate their approach to a licensed IP by focusing on quality, independent of the blockbuster movies which are coming out in parallel.

Having said that, it’s one thing to aim to model your combat on *Arkham* and quite another thing to execute on that intention. The core component of the success was the close collaboration of Design and Animation as well as our in house MoCap facilities. That allowed us to have a continuous and fast iteration process on every move in the game.

Between the player animations and the variety of classes, abilities and moves in the Nemesis System this was a hugely challenging task. What we learned was that seemingly trivial changes to animation or timing can have enormous implications on gameplay and balance.

## 3. Usability and QA

These are actually two separate topics, but they have in common that they allowed us to iterate more rapidly and close strongly.

Our Usability lab was not only continually bringing in playtests of all ability levels to play *Shadow of Mordor*, but also continually benchmarking against competition so we had some context against which to analyze the incoming data. We held regular playtests among the team, where everyone had the responsibility to play and give feedback.

This had multiple benefits. Most obviously it made everyone more familiar with the game, and more committed to improving it. Secondly, by being obliged to provide feedback, it increased everyone’s sense of ownership and made people more comfortable with communicating tough or negative feedback across disciplines.

Additionally, we had very strong and experienced in-house QA. This was the one core discipline on the team that did have a wealth of third person action game experience. They also provided the most conservative and realistic assessment of what it was going to take to go from Alpha to Beta and from Beta to Final, which enabled us to hit our dates and ship on time.

## 4. Proprietary Tech

I mentioned at the start that this was our first third person, open world action game, however we had an enormous advantage in having our own engine and an extremely experienced engine and tools team.

Monolith Productions has historically created games across a very diverse range of genres, from FPS to MMO to Strategy and the ability to adapt to the requirements of our design was a huge asset which made everything else, including the Nemesis System possible.



*Concept art provided courtesy of Monolith Productions*

Another big win for *Shadow of Mordor* was that the entire studio and team were focused on a single game, where previously Monolith Productions had been developing multiple titles in parallel.

This singular focus allowed the engineering team to direct all of their efforts towards new platform adoption and optimizing both the runtime systems and the tools to the requirements of a single game.

Another big win was our robust build infrastructure, which allowed us to get vetted changes out to the team rapidly and always have a stable version of the game running to test and play. This was essential to our ability to rapidly iterate.

## 5. Publisher Support

*Arkham* had shown stakeholders that the right way to approach a license was not to make a “movie game.” It is to make the best game that you can, that plays to the strengths of games as a medium and respects one of the world’s most prestigious IPs.

Within Warner Bros. Interactive Entertainment and from our Licensors this was the mandate we were given, that is to focus on quality and innovation. Then we were supported every step of the way, for example by having access to WETA Workshop in New Zealand, having a great presence at E3 2014 and strong marketing support at launch.

The level of communication and feedback from executives and partners was clear and well informed and we were able to remain aligned on our goals throughout the project, including our approach to IP and our focus on

the innovation of the Nemesis System.



# Postmortem: Monolith Productions' Middle-earth: Shadow of Mordor

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## What went wrong

So that was the fun stuff, seen through the rosy glasses of hindsight... I think it's the "what went wrong" issues that actually constituted our most significant learnings. "What went right" is usually more obvious and intuitive, even if it's very challenging in execution, "what went wrong" is a test of the teams' ability to adapt and overcome...

### 1. First Timers

This was our first third person, open world action game and for many of us our first project as a team. This created many challenges and a lot of uncertainty, especially in combination with our focus on an innovation such as the Nemesis System.

We not only had to trust each other in terms of the process of creating the game, we also had no clear benchmarks or data to demonstrate that it would work even once it was created. This insecurity about our core systems led us to direct a lot of effort to peripheral systems such as side activities and even some epic features like a climbable Great Beast that later got cut.

Ultimately, as the Nemesis System started to prove itself through Usability, we became very focused on two things – our innovation and the core gameplay. One of the key ways that we tried to stay on target was to "always be shipping" – that is to have meaningful consumer facing demos or deliverables no more than three months apart. Sometimes demos, such as E3, can be treated as inconvenient distractions from the main product and schedule.



We treated them as our top priority as they helped us get alignment on the goals of the game, as well as to define clear targets for final quality. Additionally, they helped us generate meaningful data and metrics on how

long it took to produce content at a shippable level of quality. This in turn allowed us to become progressively more accurate in our scheduling.

## 2. Over Ambitious

During pre-production, we didn't have good metrics on our production capacity. This led to the specification of the game being over-ambitious, which as we started to get a clearer picture of reality required us to make some pretty big and painful cuts.

This created a double dip of pain; firstly there was the lost work on the features that were cut. Secondly we created quite significant amounts of new work to replace the cut features or content including some large wilderness areas and epic creatures such as the Great Beast mentioned above.

Because even when a feature or quantity of content is cut something has to be redesigned and created to take its place and often that work in its turn was greater than we had anticipated.

## 3. Nemesis System Churn

The Nemesis System started with a fairly simple idea of personal villains, then during pre-production, it went through quite a bit of feature creep which made it significantly more complex and took it further away from the core promise.

For example at one point we had multiple Uruk Factions with separate bars for Morale and Discipline, each Captain influenced these Bars and their state determined the behavior of the Orcs in combat as well as emergent missions. At this point, their Hierarchy UI looked somewhat like a Christmas tree.

Then as we play tested and refined the gameplay, we progressively returned to something closer to the original focus, but with some key improvements based on the systems we had created under the hood. Having said that, some strong features did come out of the exploration, in particular the Domination feature and the ability to create your own followers and directly control how the Uruks turn against each other.



This was an improvement and evolution over the original vision which was closer to Sam and Frodo's experience in Cirith Ungol, where interrogation did not have any magical properties and you were turning your enemies against each other. The final game is closer to the idea of the power of the One Ring where you are

directly controlling your Enemies.

## 4. Communicating our Innovation

Throughout development, we didn't do a great job of communicating the promise of the Nemesis System, either internally or externally. This created an additional burden of explanation each time we demoed or pitched the game and made the game feel more systemic and mechanical than we wanted.

Players and reviewers ultimately did a much better job of expressing their own user stories than we had, and this was the tipping point when people really "got it". This taught us the power of giving players the tools to share their experiences and stories with each other and how meaningful those stories can be. This led us to prioritize the development of Photo Mode feature that we added after release in order to support player expression.

## 5. Condensing to One Team

One of our major challenges during the course of development was that Monolith Productions condensed a couple of smaller game teams that were finishing products into a large, single team set-up.

This meant that new team members had to be integrated together very rapidly, and new production processes had to be re-organized for best efficiency and results. Some team members also had to adapt to working on a new genre. This had the potential to be extremely disruptive and there were bumps along the road as we worked toward those goals.

However, the key to us all being in the same boat was that it forced us all to paddle in the same direction. Becoming a single team studio delivered a level of focus which made the growing pains inherently trivial. Actually, we are possibly cheating a bit here by listing this point under "what went wrong," because perhaps more than any other point this single team focus was key to our success.

## Conclusion

The three years of the development of Shadow of Mordor were at various times stressful, educational and inspiring. We didn't just make a game, we also made a great team. But in the end, our goal will be to give players the tools to surprise us with their awesome stories.