

Demand forecasting and price optimization at a movie theater

Case study



Berlin, 2017



Initial questions and motivation to optimize pricing...

How can we increase our ticket revenues without loosing customers?



What can we do to push online sales?

How to stimulate demand?

Moving beyond traditional approaches and introducing dynamic pricing shows higher revenue uplifts

Established: Static optimization



- Price differentiation week vs. weekend
- Afternoon vs. evening
- · Online vs. box-office
- Potentially optimize layout of price categories, etc.

+2 - 4%

revenue

Innovative: Dynamic optimization



Focus

- · Automatic demand forecast per show
- Optimized pricing in real-time
- Consideration of factors like:
 - Time of booking
 - Weather and season
 - Vacation
 - Current number of bookings
 - Exhibitor's strategic objectives



Smart Pricer's Tool gives an answer the two key questions: How many will come and what is the right price-mix...for each show

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Price Demand prediction Price optimization publishing IT SP Machine Learning SP Algorithms vista Date and time Bookings API IMDb External services¹ Thursday 8pm system & solutio Preis How many will come? IFUR What is the right or price mix? 83 visitors Time and tickets solo Forecast for each show Right price-mix for each show

We offer three options to implement dynamic pricing in cinemas



- Only one category "Normal ticket", price depends on time of booking and show demand
- Starting price cheaper, final price more expensive than today



Forecast, tickets sold and time

- Number of saver tickets depends on time of booking and demand for the show
- Saver tickets cheaper, normal tickets more expensive than today





Forecast, tickets sold and time

- Number of seats per category depends on time of booking and demand
- Starting price-mix cheaper, final price-mix more expensive than today

Two years of live operation have shown that revenues increase by +5-10% and moviegoers accept the price model



1) Low defined as <20%, medium as 20-50%, high as >50% occupancy

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Three easy steps to test



Real-time dynamic pricing helps cinemas achieve their strategic goals and is picking up momentum across the globe



Incer use

Incentivize online and use ticketing data

Countries where at least one of the top 5 exhibitors either signaled interest or is already working with Smart Pricer

off-peak times

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We are looking forward to speaking with you



Christian Kluge

Founder and CEO christian.kluge@smart-pricer.com

- 5 years experience in top management roles in pricing and product (airberlin)
- 2 years experience as consultant on strategy and price optimization projects for multi-nationals (McKinsey)
- M. Sc. in Business und Engineering



Franz Blechschmidt

Founder and CCO franz.blechschmidt@smart-pricer.com

- 6 years experience in pricing and revenue management in aviation und consulting (Lufthansa, airberlin, Lufthansa Consulting, Germanwings)
- Experienced entrepreneur with a passion for innovation
- B.A. in Aviation Management



Why Smart Pricer?

· · FIC
Quality
Quie
Good

High quality analysis

Our team has worked at top-tier management consultancies like McKinsey and Lufthansa Consulting. We apply the same quality standard to our work as these companies. The focus is on facts and actionable insights.



Excellent knowledge about pricing

We focus 100% on pricing. We have a total of +10 years professional experience from numerous roles in managing products and prices. This background combined with previous pricing optimization projects in various B2C industries give us the context to have a deep understanding of pricing.



Long-term relationship and big data solutions

We aim to develop long-term relationships with our customers. On top of developing new concepts, we actively support their implementation and have the IT tools at hand to automate pricing decisions using big data analytics.

Frequently asked questions about dynamic pricing

Are distributors ok with this?

- As long as i) ticket discounts are modest and ii) the average ticket price increases distributors are big fans of the model as they participate in revenue increases
- FYI: All 5 majors already support the model in Germany

How do you measure the revenue increase?

• We do A / B tests, i.e. we test average ticket price and attendance development at theaters with dynamic pricing against theaters without dynamic pricing

What is the workload for preparing a test?

It typically takes only ~ 1 - 2 weeks and involves three steps:

- 1. Extract historic booking data for SP analysis (a few hours max)
- 2. Add new price card in POS / ticketing system and test swaps (a few days)
- 3. Prepare customer communication, SP can support here (a few days)
- What is the workload for operating it?
- With integration: None, it is fully automated
- Without integration: ~5 10mins per day for daily price updates done by the local theater or central pricing team
- Can I integrate this with my POS/ticketing system?
- We have integrated with some POS systems already
- For the test however, we do NOT need an integration price updates can be done in 5 – 10mins per day



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