



# The Future of Zoos

An experience approach into the future with emphasis on Zoo Emmen



Stenden



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## Introduction

Emerging trends in the experience economy force modern zoos to adapt to conceptual changes. In the view of experiences and expected trends, the future of zoos can be envisioned, helping the contemporary zoos to be successful. Most important question is how zoos will look like in the future, the theme of this research. Research into the future of zoos as well as a focus on the experience economy and the internet domain were taken into account when developing this view on the future. The format of this work is presentations of research which was performed from 2011-2012 and takes local developments Dierenpark Emmen (Zoo Emmen) as well as global developments into account. The major emphasis will be on Zoo Emmen, its present facilities, themes and ideas along with comparison with other renowned and top rated zoos in the world. In this way, strong and weak points of the addressed zoos will be identified and in the light of them, recommendations would be made for Zoo Emmen. In this way, the research will also be able to have a look into the future developments of the zoos.

The major research areas will be anticipating the nature of the future zoos in view of:

1. The Zoo Experience – an international experience benchmark;
2. The Zoo of the Future – a Scenario Planning approach towards the future;
3. The virtual zoo - zoo's in the internet domain.

Stenden university of applied sciences – with the support of HISWA and Recron – has launched the European Tourism Futures Institute (ETFI) in November 2009; an institute that specializes in the development and application of scenario planning for the tourism sector. The institute is subsidised by the European Fund for Regional Development and Peaks in the Delta and is funded by SNN, a cooperation of the Northern Netherlands Provinces, the provinces of Friesland, Drenthe and the municipalities of Leeuwarden and Emmen. The picture below shows the other supporters of the ETFI.

ETFI gives shape to Stenden university's ambitions in the field of knowledge development, knowledge transfer and knowledge application, and aims to establish sustainable alliances between education, local and regional governments, societal organisations and the tourism industry to create a center of excellence for the North-Netherlands and beyond. The mission of the ETFI is to make an active and inspiring contribution to tourism futures by using scenario planning methodologies. This work "The Future of Zoo's" will not only be able to prove useful for Zoo Emmen's developments but for zoos at large, indicating the past experiences, visitors' experts, analysis on the basis of multiple criteria and competitive evaluation.

European Tourism Futures Institute  
Leeuwarden, February 2013

**Drs. Maaïke de Jong**



## Management summary

### English

This research concerning the experience and future of zoos was carried out from 2011-2012 and takes regional ideas concerning Zoo Emmen as well as global visions into account. The research focuses partly on Zoo Emmen, its present attractions and visitors while also comparing and contrasting visions on the future in relationship to other international zoos in the world. In this way, remarkable experiences and ideas will be identified and in the light of them, it can serve as inspiration for stakeholders of zoos at large.

The main research subject is a look at the future zoos in view of:

1. The Zoo Experience – an international experience benchmark;
2. The Zoo of the Future – a Scenario Planning approach towards the future;
3. The virtual zoo - zoo's in the internet domain.

The quickly changing world of leisure and tourism continually asks zoos to adapt to the emerging trends of the experience economy. Whereas the traditional zoo solely dealt with educational, conservational and recreational elements, modern zoos have to face progressively changing concepts that put pure entertainment and enjoyment as their first priority.

The first research question, identified; to what extent the performance of the zoos meet the expectations of the visitors regarding the predefined criteria. The Zoo Emmen scored high in the different categories and meet expectations regarding the facilities within the zoo.

Additionally, concepts of the benchmarked zoos have been reviewed and analysed in how far they are recognized by visitors. Lastly, a closer look has been taken at the researched concepts in order to select the most promising and feasible ones to inspire Zoo Emmen. When taking these improvement points out of the result into consideration, Zoo Emmen is able to compete on an international level.

To keep up with tourists and visitors of zoos, zoos should look at the possibilities of the future. One way to address the future is scenario planning. The problem statement for this research is to explore what are the design criteria for elite zoos, and to construct and explain promising future scenarios for these zoos, using techniques of scenario planning. The following four scenarios were designed:

1. The 5th Generation Zoo: the combination between the experience economy and nature immersion plus a focus on the world and advocating for the importance of nature and its diversity and an ambassador with sustainable solutions;
2. The 3th Generation Zoo: a nature-like park with a commercial edge where sponsors and commercial venues are present. Media presence is visible, but also sustainability is part of the concept here;
3. Modernism Immersed: more modern functionalism than the importance of nature. Also a focus on the commercialization is present within this scenario, but the designers do keep in mind the importance of enrichment and such criteria, because they do have a function within zoos;
4. A Sketched-up Zoo: next to bits of nature in the exhibits, cartoonish paintings are also immersed into these exhibits, giving it a colourful, warm and in-depth feeling. Also the advocate role is important within this scenario as is educating its visitors about the possibilities within sustainability.

Before mentioned scenarios should keep the ideas presented within the modern day elite zoo and the ideas within the design of new exhibits in mind, with decisions concerning the future. In all scenarios the community aspect of zoos is implicit in order to be future proof.

The virtual zoo contains the do's and don'ts for the website of Zoo Emmen, some do's are; the use of webcams, multilingual and movies. The don't are; not to much scrolling and a short charging time.

## Deutsch

Die Untersuchung der zukünftigen Entwicklungsmöglichkeiten von Zoos erstreckte sich über den Zeitraum von 2011 bis 2012 und berücksichtigt sowohl regionale Konzepte wie den Zoo Emmen als auch globale Visionen. Die Recherche fokussiert sich dabei auf Besucher und Attraktionen des Zoos Emmen und vergleicht dann Zukunftsvisionen in Relation zu internationalen Zoos weltweit. So werden außergewöhnliche Erlebnisse, Angebote und Ideen identifiziert und können als Inspiration für leitende Akteure im Bereich Zoo dienen.

Das Hauptthema der Untersuchung ist die Frage nach der Zukunft der Zoos unter folgenden Aspekten:

1. Das Zoo-Erlebnis – der internationale Markt setzt Maßstäbe;
2. Der Zoo der Zukunft – eine Zukunftsprognose mit Szenario Planning;
3. Der virtuelle Zoo – Zoos im World Wide Web.

Der sich schnell ändernde Markt für Freizeit und Tourismus stellt immer neue Anforderungen an die Zoos und erfordert eine ständige Anpassung an die aktuellen Trends der Experience Economy. Waren Zoos früher lediglich für die Bildung und Erholung der Besucher zuständig und zoologisch konservatorisch tätig, müssen sie sich heute nach Konzepten richten, die die Unterhaltung und den Freizeitspaß der Besucher als höchste Priorität setzen.

Die erste Forschungsfrage definiert, in welchem Umfang das Angebot der Zoos die Erwartungen der Besucher in Bezug auf bestimmte Kriterien erfüllt. Der Zoo Emmen hat in verschiedenen Kategorien hohe Punktzahlen erreicht und die Einrichtungen erfüllen daher die Erwartungen der Besucher an den Zoo.

Weiterhin wurden die Konzepte der zu vergleichenden Zoos überprüft und untersucht, inwieweit die Konzepte von den Besuchern wahrgenommen werden. Zuletzt wurden die Konzepte ausführlich begutachtet, um die erfolgreichsten und am besten Umsetzbaren auszusuchen, die dem Zoo Emmen neue Impulse geben könnten. Wenn die vorgeschlagenen Verbesserungen umgesetzt würden, wäre der Zoo Emmen ohne weiteres auf internationaler Ebene wettbewerbsfähig.

Um mit den Anforderungen der Touristen und Besucher Schritt zu halten, müssen sich Zoos mit den möglichen Entwicklungen der Zukunft auseinandersetzen. Eine Methode dafür ist Szenario Planning. Die Fragestellungen der Untersuchung sind die Erforschung von Gestaltungskriterien für Elite-Zoos und die Erstellung und Deutung von vielversprechenden Zukunftsszenarien mit der Methode des Szenario Planning. Folgende vier Szenarien wurden entworfen:

1. Der Zoo der 5. Generation: Eine Kombination aus der Experience Economy und Leben im Einklang mit der Natur und der Welt. Der Zoo steht für die Wichtigkeit der Erhaltung der Vielfalt in der Natur und ist ein Botschafter für nachhaltige Entwicklungen;
2. Der Zoo der 3. Generation: Ein natürlicher Park mit einem kleinen kommerziellen Teil, in dem sich Sponsoren und Gewerbe präsentieren. Die Medien sind präsent, trotzdem ist das Thema Nachhaltigkeit ein Teil des Konzepts des Zoos;
3. Abgetaucht in die Moderne: Moderne Funktionalität ist wichtiger als die Natur. In diesem Szenario ist ein Fokus auf Kommerzialisierung zu sehen, wobei die Gestalter trotzdem persönliche Weiterbildung berücksichtigen, da dies zu den Funktionen des Zoos gehört;
4. Der skizzierte Zoo: Neben Ausstellungsstücken aus der Natur werden auch gezeichnete Cartoons in die Ausstellungen integriert, um ein farbenfrohes, warmes und eindringliches Gefühl zu vermitteln. Die Rolle des Zoos als Botschafter ist wichtig, denn er informiert die Besucher über Nachhaltigkeit.

Die oben genannten Szenarien geben Hilfestellungen bei zukunftsrelevanten Entscheidungen für moderne Elite-Zoos und die Gestaltung von neuen Ausstellungen. Um zukunftsicher zu sein, muss der unausgesprochene Aspekt der Gemeinschaft in allen Szenarien berücksichtigt werden.

Der virtuelle Zoo gibt Hinweise für die Webseite des Zoos Emmen: Positiv sind die Einrichtung von Webcams, Mehrsprachigkeit und Visualisierung durch Filme. Zu vermeiden sind zu viel Scrollen am Bildschirm und lange Ladezeiten.

## Dutch

Dit onderzoek, gebaseerd op de ervaringen en de toekomst van dierentuinen, is uitgevoerd in 2011-2012 met de regionale ideeën gericht op Dierenpark Emmen, maar ook wereldwijde visies in acht neemt. Het onderzoek richt zich gedeeltelijk op Dierenpark Emmen, met zijn huidige attracties en de bezoekers, waar ook een vergelijking wordt gemaakt van de visies van internationale dierenparken wereldwijd gericht op de toekomst. Op deze manier zullen er opmerkelijke ervaringen en ideeën worden geïdentificeerd, welke kunnen dienen als een inspiratie voor belanghebbenden van dierenparken.

Het doel van dit rapport is om een beeld te krijgen van de toekomst van dierentuinen met betrekking tot de volgende punten:

1. Dierenpark ervaringen - een benchmark naar internationale ervaringen;
2. De toekomst van dierenparken - Een aanpak gericht op de toekomst door middel van scenario planning;
3. Virtuele dierenparken – dierenparken op het gebied van internet.

De snel veranderende wereld van toerisme en vrije tijd eist constante aanpassingen van dierenparken aan de opkomende trends van de 'experience economy'. Waarbij de traditionele dierentuinen zich uitsluitend bezig houden met de educatie, duurzaamheid en recreatieve aspecten, moeten de modernere dierenparken zich aanpassen aan het concept van pure ontspanning en vermaak als eerste prioriteit.

Ook zijn er concepten geanalyseerd, van toonaangevende dierenparken, in hoeverre deze worden herkend door de bezoekers. Tot slot is er onderzoek naar de verschillende concepten gedaan om te kijken welke het meest belovende en haalbaar zijn om Dierenpark Emmen te inspireren. Als Dierenpark Emmen deze verbeterpunten in overweging neemt kan het Dierenpark op internationaal niveau concurreren.

Dierentuinen moeten voortdurend kijken naar de mogelijkheden in de toekomst om toeristen en bezoekers bij te kunnen houden. Een mogelijkheid om naar de toekomst te kijken is scenario planning. De probleemstelling van dit onderzoek is om te analyseren welke criteria er bestaan voor moderne dierenparken en hiervoor toekomstscenario's te creëren met behulp van scenario planning. Hierbij zijn de volgende scenario's ontworpen:

1. The Fifth generation Zoo: een combinatie tussen de 'experience economy', omgeven door natuur, focus op de wereld, pleiten voor het belang van de natuur, diversiteit en duurzame oplossingen;
2. The Third Generation Zoo: Een op de natuur gericht park met een commerciële tint, waarbij commerciële locaties aanwezig zijn met verschillende sponsors. In dit concept speelt duurzaamheid een rol, maar is de media duidelijk zichtbaar;
3. Modernism Immersed: de belangrijkheid van de natuur wordt achterwege gelaten maar er komen meer moderne doeleinden. Tevens een focus op de commercialiteit is aanwezig in dit scenario, hierbij houden de ontwerpers rekening met het belang van deze criteria omdat ze een duidelijke functie hebben binnen dierentuinen.
4. A sketched-up Zoo: naast stukken natuur in de verblijven, worden striptekeningen in de verblijven opgenomen om een kleurrijk, diepgaand en warm gevoel te geven. De adviserende rol hierbij is belangrijk in dit scenario, net als het educatieve element. Het educatieve element is er om de bezoekers bewust te maken van de mogelijkheden van duurzaamheid.

In bovengenoemde scenario's moet men rekening houden met de modernisering van verblijven binnen de moderne dierentuin. In alle scenario's is het gemeenschappelijke aspect van dierentuinen toekomstbestendig. De virtuele dierentuin bevat do's en don'ts voor de website van Dierenpark Emmen, een aantal do's zijn: het gebruik van webcams, meertalig en het gebruik van filmpjes. De don'ts zijn: het vele scrollen en een lange laadtijd.



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## 1. The zoo experience – an international experience benchmark

For this study, the term zoo is being defined as “a place where living animals are kept, studied, bred, and exhibited to the public” (The Free Dictionary, 2012) and has to be seen in a multidisciplinary context, as it embraces several roles. The Zoo Emmen, which started 75 years ago as a small family business, is today a well-developed, expanded animal park (Zoo Emmen, n.d.). The recently developed concept of “Zoo 3.0” has started its implementation and is planned to assure a stable market position of zoos such as Zoo Emmen. “Zoo 3.0” hereby stands for the ultimate new concept, a new generation of zoos. However, does it offer a promising and tempting concept to reintroduce the zoo as a main leisure attraction of mankind? What is it that lures visitors to the zoo? What are they looking for today? The purpose of the research is to discover if Emmen’s concept is a future-oriented approach in attracting visitors and to explore in how far and by what means it is advisable to adjust this concept.

Hereby, Zoo Emmen is benchmarked towards four other zoos, which provide an insight into possible options for modernisation: Singapore Zoo, Leipzig Zoo, Bioparc Valencia and Disney’s Animal Kingdom in Orlando. These Zoos have been chosen for the reason of on-going or recently finished modifications that are representative for the modern 21st century zoo. The benchmark is based on internet observation that is analysed according to various criteria.

### 1.1. Zoo Emmen

After Zoo Emmen opened its gates to the public in 1935, it had to cope with severe financial shortcuts resulting out of the Second World War. As soon as the war was over, the family owned business experienced its first period of prosperity in 1945. Due to returning financial problems, the zoo got partly sold to the city of Emmen and expanded a new in the 1970’s.

The current Zoo Emmen brands itself as a “zoo without borders and fences” that offers visitors the possibility to participate in a small world travel through different landscapes.

High attention is paid to maintain a certain level of perceived authenticity by showing the animals in their natural surroundings, in large enclosures only encircled by natural barriers such as water ditches (Zoo Emmen, n.d.).

To strengthen conservational effort, the zoo is engaged in projects led by WWF that are dealing with endangered species. Further, does the park offer visitors the possibility to take over animal partnerships (Dierenpark Emmen, 2010; Zoo Emmen, n.d.).

In 2002, the park got extended and now consists of two parts, the old one in the centre of Emmen “Locatie Centrum” and the new “Locatie Es”. Both parts are connected via an overhead crossing which takes up a time of about 10 minutes to pass. To give an overview about the zoo structure, appendix 1 includes a layout plan (Dierenpark Emmen, 2012). The biggest attraction exhibits at Emmen Zoo are the elephant and penguin herds which present the largest in-captivity-living communities in whole Europe. Further, does Emmen offer the jungle experience “AmeriCasa”, an aquarium, an indoor butterfly garden, a petting zoo with domestic animals as well as the biochron, a museum that provides visitors with information about life’s evolution (Dierenpark Emmen, 2012; Zoo Emmen, n.d.).

*In 2012, the zoo is among the 10 nominated for the best-place-to-be in the whole Netherlands.*

To provide guests with food and beverage facilities, the park offers six restaurants, all located in differently themed areas. It is also possible to make arrangements for a private or company event to take place at the zoo premises (Dierenpark Emmen, 2012; Gemeente Emmen, 2012; Zoo Emmen, n.d.). In 2011, the Dierenpark Emmen with its centre location and partly new developed location was the winner of the Dutch Tourism Association’s (ANWB) rating for the best attraction in the region of Drenthe. In 2012, the zoo is among the 10 nominated for the best-place-to-be in the whole Netherlands.

*The new park is addressed under the topic of “BeLEVENspark”, a new experience park that embodies the encounter of nature and culture, which will present the red line throughout the zoo.*

The project “Zoo Emmen Next” has started in 2009 and is planned to be accomplished by 2015 as it stands in the framework of the master plan 2020 of the city of Emmen, which mainly concerns a reorganisation of the city centre (Dierenpark Emmen, 2012, Gemeente Emmen, 2012). The new park is addressed under the topic of “BeLEVENspark”, a new experience park that embodies the encounter of nature and

culture, which will present the red line throughout the zoo. Hereby, the “World of Theatre” will play a decisive role as it connects people emotionally with the zoo animals and gives room for creativity and education. For impression of how this new park is envisioned please visit <http://www.emmen-atalanta.nl/english/home.html>

Recently, the municipality of Emmen authorised the construction of the new Zoo Emmen with an allocation of 170mln. The park is planned to be relocated towards the “Locatie Es” in the western part of the city, where up until now only the penguins and the Yukatán play area are situated.



## 1.2. History of Zoos

The idea of the zoo concept in its broadest sense can be attributed to the religious sanctuary of the Ancient Egypt (Beardsworth and Bryman 2001; Olukole and Gbadebo, 2008). In the Roman times small menageries were established, for instance in Rome, to allow public’s gaze in amphitheatres and express social status. However, the early modern zoo concept as it is known today, had its origin in Paris in the 18th century, followed by the establishment of the Zoological Society of London (Olukole and Gbadebo, 2008; Higginbottom, 2004). The zoo “in the late modern context, is undergoing a crucial and ideological transformation”. In Anderson’s words “an ill-defined and unspecified “nature” has been converted into cultural experience and spiritual commodity.” (Beardsworth and Bryman, 2001, p. 83, p.85). Turley (1999) also describes the change as a matter of commerce, and also the World Zoo Organisation (1993) and Higginbottom (2004) emphasise the change from once being a menagerie over a zoological park to a professionally managed conservation centre. Figure 1 provides a respective overview about this evolution of zoos. In the beginning of the 20th century, the most significant issue of zoos was the demonstration of power and superiority that humans have over animals.

## 1.3. Zoo visitors

With the confrontation of other emerged leisure attractions such as theme parks like Walt Disney’s Animal Kingdom, zoos are facing the challenge of providing a contemporary visitor experience; and overcoming the dark image of the past. Hunt and Crompton (2008) support this statement by claiming that the development of other leisure is of importance to keep cutting edge in quality. For that reason high service quality is of fundamental importance for every zoo (Tomas et al., 2003). Moreover, it has been found that 80% of the zoo visitors are families with children and therefore build the main target group (Tomas et al., 2003). Olukole and Gbadebo (2008) also state that visitors in zoos are mainly children.

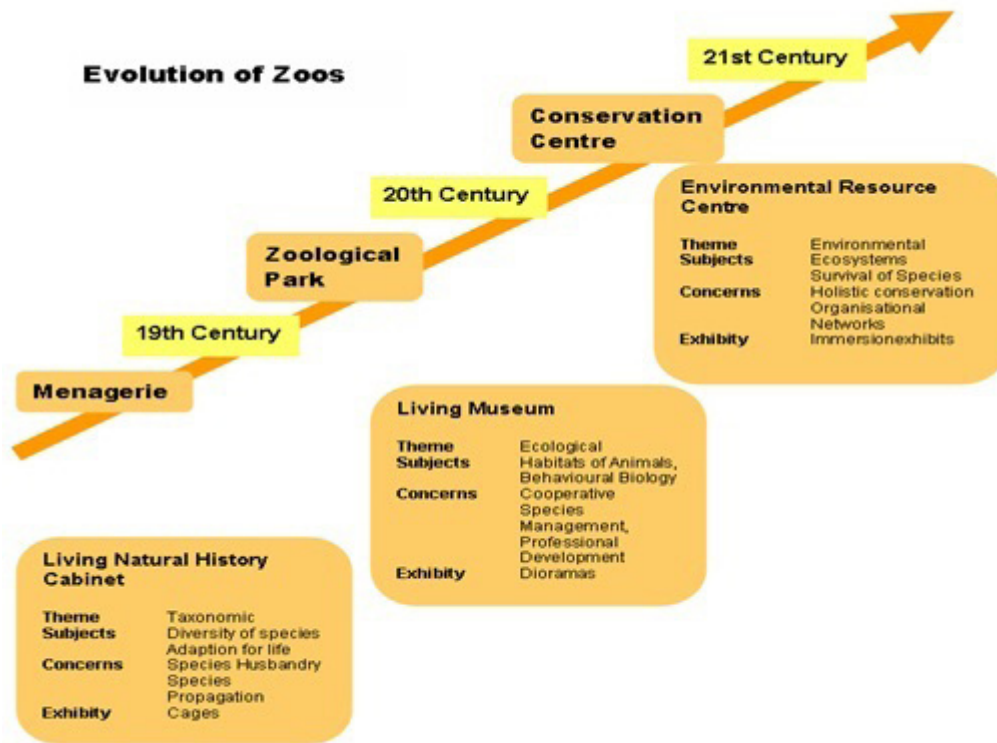


Figure 1: Evolution of Zoos (The World Zoo Organisation, 1993)

Furthermore, people visiting a zoo pay attention to several criteria which should be met in order to fulfil their expectations. Additionally, the expectation disconfirmation theory is mentioned. It means that what a person expects to find at the destination influences the reaction on the actual environment. A negative disconfirmation normally leads to the fact that people do not like the place. If expectations are met or exceeded people normally have a positive attitude towards the place (Tomas et al., 2003). Ryan and Saward (2004) reveal a list of the most important tangible attributes for visitors.

The three most important ones are that toilets have to be clean, that animal enclosures have a “good size” and thirdly that the enclosures contain stimulating materials such as toys or snacks that keep the animals active and thus interesting for the visitor. Wildlife tourism usually stands in conflict with the aspect of conservation (Ryan and Saward, 2004; Higginbottom, 2004). Taking wild animals out of their natural habitat contradicts the course of nature and is often regarded as imprisonment against the will of the animal. As several zoo- and wildlife-related studies prove, even non-consumptive wildlife tourism has severe impacts on animal behaviour that reach from changes in reproduction habits, over distress and transition of diseases to serious modifications in the ecosystem (Ryan and Saward, 2004; Higginbottom, 2004). Due to its demonstration – observation function, zoos are classified as museums (Olukole and Gbadebo, 2008), which simultaneously brings up the question whether animals can be considered as living objects that are gazed at (Turley, 1999).

Tomas et al. (2003) discuss that the already mentioned decreasing visitor numbers may be due to the increasing amount of day attractions, thus zoos face fierce competition from attractions in the private sector, such as the Walt Disney Animal Kingdom. Moreover, Turley (1999) and Higginbottom (2004) argue that alternative day-visit attractions and new, innovative wildlife attractions enlarge the competitive market. Hunt and Crompton (2008) support that tourists tend to prefer visiting destinations with multiple attractions relatively close to each other, so that variety is guaranteed and hence, possible dissatisfaction minimized. They also argue that the biggest problem for zoos is the fact that nowadays attractions that combine different elements such as culture, nature, recreational purposes, education and commercial attributes, are the most successful ones. Therefore, zoos must accept that visitors are seeking an enjoyable experience; thus, it is essential to understand the needs and wants of visitors (Turley, 1999; Tomas et al., 2003). In addition, many zoos have already developed several concepts in order to counteract these challenges.

*The biggest problem for zoos is the fact that nowadays attractions that combine different elements such as culture, nature, recreational purposes, education and commercial attributes, are the most successful ones. Therefore, zoos must accept that visitors are seeking an enjoyable experience.*

Some use the so-called open concept, meaning no barriers exist between the animals' compounds and the visitors, whereas others make use of the ecosystem. To provide a complete picture, also external influences are worth looking at when examining the challenges a zoo faces. In that regard, several authors claim the weather as an additional challenge for zoos. The Association of Zoos and Aquariums (2009), Ryan and Saward (2004) and Turley (1999) explain why weather can act as a challenge for a zoo.

Another challenge discussed by a considerable number of authors is benchmarking. Tomas et al. (2003) highlight that a zoo's performance can be measured against what visitors expect and what is important to them, as well as comparing a zoo's strengths and weaknesses against other organizations. As benchmarking presents a fundamental part of this research the following part will give an overview about the main aspects of this method.

#### 1.4. The Experience Economy

When investigating how experiences influence people the rise of the Experience Economy, as explained by Pine and Gilmore (1999), plays an important role. They base their ideas on the Progression of Economic Value. This concept is described by the authors as the progression from commodities to goods, services and finally to experiences. With rising technological improvements, people moved out of the factories and went on to work in offices, restaurants, hotels, hospitals and other establishments to deliver services on behalf of an individual customer.

*This concept is described by the authors as the progression from commodities to goods, services and finally to experiences.*

However, goods and services became commoditized and people started to search for new experiences, meaning they wanted to be engaged and create a memory (Pine & Gilmore, 1999). Moreover, increasing competition and rising prosperity are reasons for the Experience Economy.

Pine and Gilmore (1999) mention that experiences can engage people on several dimensions or realms, as it can be seen in Figure 2, ranging from passive participation to active participation and from absorption to immersion.

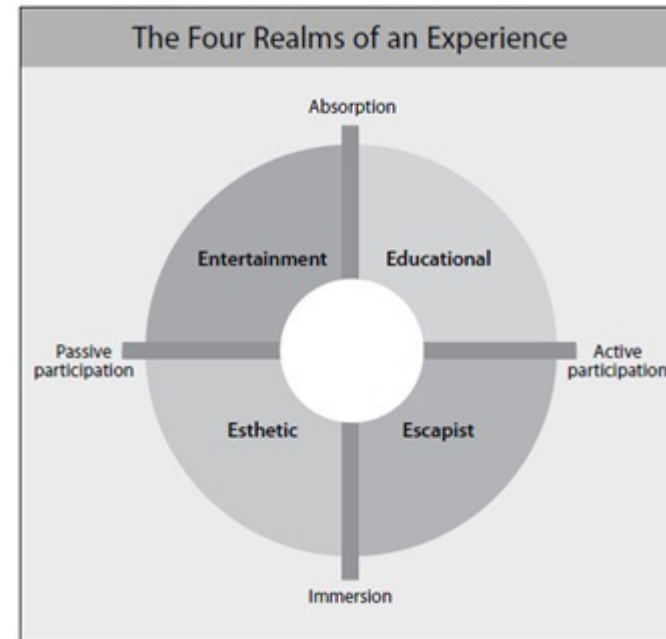
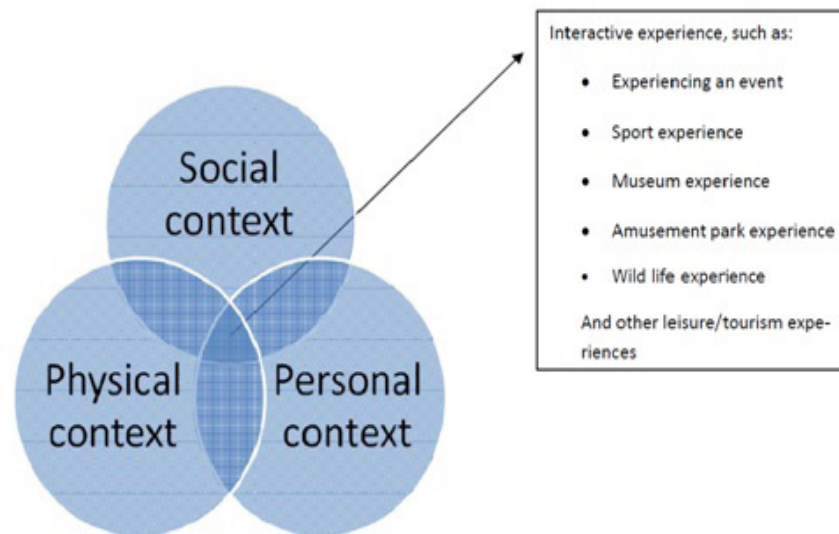


Figure 2: The Experience Realms (Pine and Gilmore, 1999, p. 30)

To take the escapist as a first example, the customer is immersing totally into the experience while actively taking part such as when visiting a theme park (Pine & Gilmore, 1999). Entertainment on the other hand does solely exist out of passive absorption of the customer which is the oldest and most familiar form of an experience. However, entertainment does not only benefit the consumers solely but it also benefits business-to-business settings as they can be the stages for an experience. An educational experience gives people the chance to actively learn, while the aesthetic experience gives the chance to just be there (Pine & Gilmore, 1999).

Falk and Dierking (1992) developed the Interactive Experience Model which proposes that the visitor's experience is shaped at any time by three different contexts named the personal context, the social context and the physical context. The personal context compiles itself out of the visitor's prior experiences, knowledge, interests, concerns and motivations which shape the visitor's perception of the actual experience. The social context, can be described as the interaction with other people that the visitor has during the actual experience such as with staff or other visitors (Falk & Dierking, 1992). The physical context is the setting or the building itself including the architecture and the atmosphere and also the objects inside. It can be seen in Figure 3 that the real interactive experience, like a wildlife experience, takes part where all three contexts overlap.



Comparably, the Experience Economy of Pine and Gilmore (1999) supposes that “companies can enhance the realness of any experiences by blurring the boundaries between realms” (p. 38) and that “the richest experience encompasses aspects of all four realms” (p. 39). Moreover, theming the experience makes it even more intense and also easily recognizable for customers. A well-developed theme is based on a storyline, as Pine and Gilmore (1999) explain, which gives an indication of what to expect but which is furthermore incomplete without the customers participation. Disney, for example, uses such themes in their various rides and especially here it is important that the theme fits the character of the enterprise to be authentic, concise and credible, as similarly explained by Beardsworth and Bryman (2001). Additionally, the themes must be supported by positive cues such as personal customer contact which renders the experience with permanent impressions. Also, it is mentioned by Pine and Gilmore (1999) as favourable to engage all five senses of the customer in order to create long lasting memories.

### 1.5. Concept 3.0

The key term “Zoo 3.0” is a synonym for the ultimate new zoo experience that differentiates itself from other zoos and ensures a smooth future existence. Thus, “Zoo 3.0” entails new and innovative ideas to lure visitors to Zoo Emmen. Hence, the concept reflects the perception of quality of the 21st century visitor and embraces topics such as atmosphere, visitor involvement, sensual aspects, infrastructural design and in part technological aspects as unique selling points. However, in this research the emphasis will be on the visitor experience.

*The key term “Zoo 3.0” is a synonym for the ultimate new zoo experience that differentiates itself from other zoos and ensures a smooth future existence.*

Figure 3: Interactive Experience Model (Falk and Dierking, 1992, p. 6, adapted by De Jong, 2009)

## 1.6. Research Methodology

The main focus of this chapter lies on the examination of tourists' experiences at the different animal parks in order to gain better understanding of the visitors' level of satisfaction. The chosen method can be considered as an online observation research which is based on primary data. In order to gather tourist experiences, different holiday review websites will be concentrated on TripAdvisor.com, Holidaycheck.com, VirtualTourist.com, IgoUgo.com as well as ParkScout.com.

These websites have been chosen due to their high public profile and the total amount of reviews written which are concerned with the benchmarked zoos. All reviews will be analysed according to the listed criteria as described in figure 4.

The following criteria which will be investigated among the benchmark partners have been developed on the basis of Ryan's and Seward's (2004) article: The Zoo as Ecotourism Attraction - Visitor Reactions, Perceptions and Management Implications: The Case of Hamilton Zoo, New Zealand, on Tomas' et al. (2003) article Assessing Service Quality and Benefits Sought Among Zoological Park Visitors as well as on De Jong's (2009) article Understanding Visitor's Perceptions of Attractions. The criteria have been arranged according to social, personal and physical contexts as proposed by the Interactive Experience Model by Falk and Dierking (1992).

Personal Context	Social Context	Physical Context
Price Entrance Fee F&B Extra Activities	Quality of Staff Presence Skills Friendliness	Accessibility Public Transport Own Transport Parking Facilities
Atmosphere	Interactive Experiences Involvement of Visitors	Opening Times Entrance Animal Houses
Waiting Times	Entertainment	Infrastructure within the zoo Signposting Convenience of pathways Resting Places Exercise and/or physical challenge Garbage Bins
Learning Experience Info Material Education	Team / Family Spirit	Facilities Quality Availability Cleanliness Child-Friendliness Disability-Friendliness
Conservation efforts of the zoo		Wildlife Variety View Activity Proximity
Repeat Visitation		Enclosures Size Replication of natural environment
Popularity of the zoo		Aesthetics Design Attractiveness
Individual Preferences		

Figure 4: Criteria of Service Quality

### 1.7. Analysis of Research Outcomes

To what extent does the performance of the zoos meet the expectations of the visitors according to the predefined criteria? In the following part, the personal, social and physical context of visitor's experience at Zoo Emmen, Singapore Zoo, Leipzig Zoo, Disney's Animal Kingdom Orlando and the Bioparc Valencia is presented.

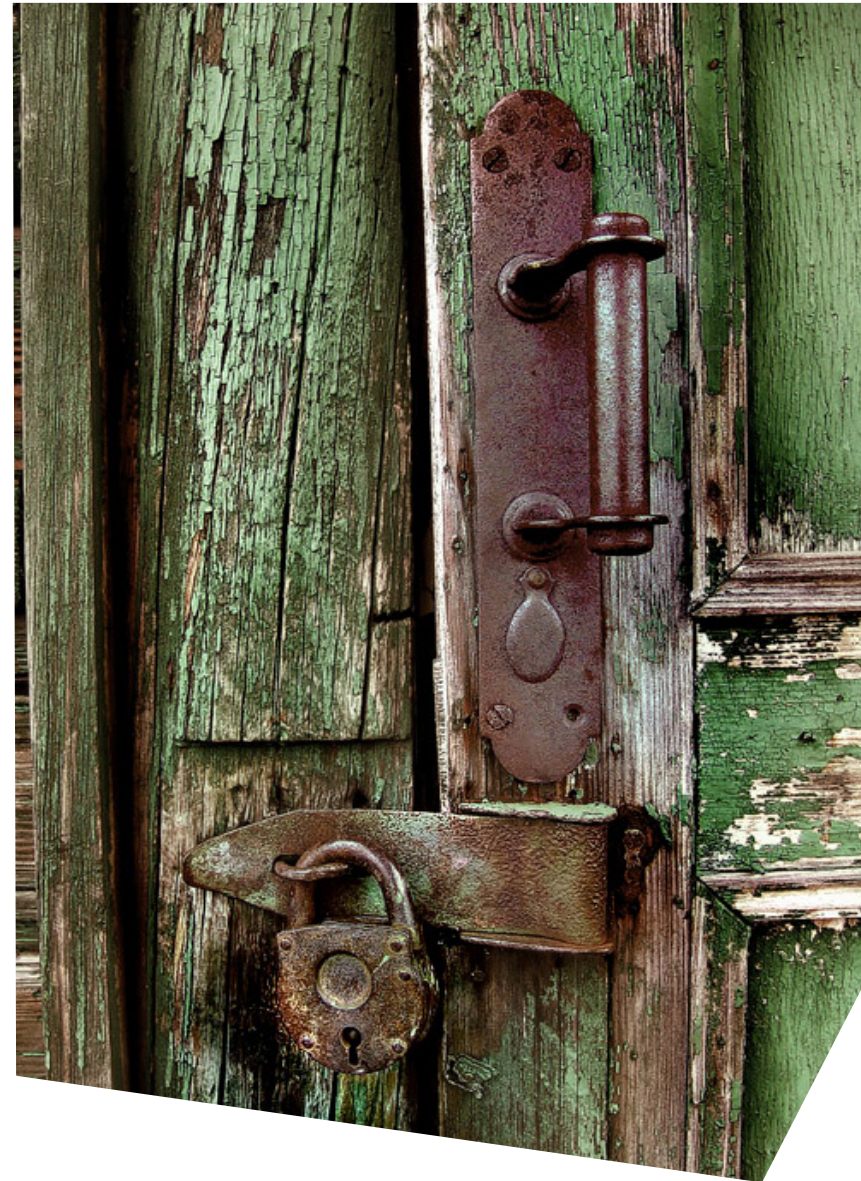
#### 1.7.1. Personal Context

##### Price

The majority of the visitors of Zoo Emmen consider the entrance fees as too high (€20,50). The prices in restaurants and cafés within the zoo premises are rated as reasonable and not exaggerated. Opinions about parking fees differ highly. At the Singapore Zoo, people complain less about entrance fees, which are about €12 per adult. The majority of visitors of Zoo Leipzig feel that the entrance fees are very high (€17) but compensate it with the value and quality they get for their money. People that visited Disney's Animal Kingdom payed about €50 and mentioned high prices in general, as well as the extensive charge for food and beverage. However, visitors seem to expect high expenditures as they are visiting a Disney park. The Bioparc Valencia satisfies the majority of its visitors with the fee they charge at the entrance (€20). The research discovered that in 4 out of 5 parks, visitors rate the atmosphere as positive. Only Disney's Animal

Kingdom provokes some negative comments in which visitors express their disappointment as expectation seemed to be higher than the actual experience.

*The majority of the visitors of Zoo Emmen consider the entrance fees as too high (€20,50).*



### Waiting Times

While no comments are given on potential waiting times for the zoos in Emmen, Singapore and Leipzig, visitors of Animal Kingdom post remarks about long lines in front of rides and restaurants. Besides, does crowding on midday and long lines on Sundays impact the satisfaction of the visitors of Bioparc Valencia?

### Learning Experience

The term learning experience embraces information given to the visitor in order to educate him about animals and nature. The Zoo Emmen raises knowledge of its visitors mainly through information boards at the exhibits. The Singapore Zoo instead seems to educate its visitors rather by means of shows and demonstrations than by information boards. Reviews about Leipzig Zoo mention behavioural experiments that zookeepers carry out with monkeys during which the visitors are allowed to watch through a window and get the possibility to experience direct results of the study. Reviews about learning experiences at Animal Kingdom indicate that except for the 3D show and descriptive material, most of the knowledge do visitors gain by simply watching the wild and participating in safaris and other animals walks. The Bioparc Valencia mainly educates its visitors by means of signs and labels, which shows a concept that is comparable to the one in Emmen. Positively commented hereby is the availability of information in Spanish and English.

### Conservation Efforts

Concerning conservational efforts, the overall tone among commented zoos is positive. Especially highlighted are the breeding programs and conservation efforts of the Bioparc Valencia.

### Repeat Visitation

Visitors of Zoo Emmen mention that they will come back to see the rest of the place they didn't make to visit the first time due to the park's size. Reviews on Singapore Zoo show high repeat visits. Visitors of Leipzig Zoo tend to return because of the offered seasonal pass, which is rated as absolutely profitable. Disney's Animal Kingdom is the only park that tracks negative comments on repeat visitation. Hereby people argue that the park does not offer enough variety to come back for or that the value is not worth the money.

The reason for visiting the Bioparc Valencia according to the reviews is rather experience-based.

### Popularity of the Zoo

The Zoo Emmen is complimented by visitors of being the "most enjoyable zoo in the Netherlands", while some visitors even lift up this reputation to "the nicest zoo in Benelux". The Zoo in Singapore is however praised on a global basis. The only factor that is threatening its image is the overcrowding that is disturbing the visitor's experience. Animal Kingdom instead has a high status of popularity due to the fact that it belongs to the Disney brand that widely-known stands for fantasy, magic and themed worlds as Beardsworth and Bryman (2001) stated. However, overcrowding is hereby also a limiting factor.

### Individual Preferences

As highlights of the zoo visit, people mentioned at Zoo Emmen the elephants, penguins, sharks, the butterfly garden and tropical houses. The most popular wildlife attractions in Singapore consist of the white tigers, the butterfly area, polar bears, kangaroos and turtles. In Leipzig, visitors highly appreciate the themed worlds of Pongoland and Godwanaland, but also standard zoo inhabitants like lions and giraffes. In contrast to the other zoos, people that visited Animal Kingdom prefer not the wildlife itself, but the entertaining experience with it. Reviews of Bioparc Valencia emphasized the experience-based feeling as their highlight in the zoo what they described as "the African feeling" or "sitting in a café and watching animals".

*As highlights of the zoo visit, people mentioned at Zoo Emmen the elephants, penguins, sharks, the butterfly garden and tropical houses.*

### 1.7.2. Social Context

#### Quality of Staff

The category in this research embraces the topics of presence, skills and friendliness of the zoo's staff. Employees at Zoo Emmen were considered as friendly, caring and helpful from all respective customer reviews. Visitors of Singapore Zoo are enthusiastic about the guides' passion and care. On the other hand, visitors criticized the staff's language skills. Leipzig Zoo is highly complimented for the friendliness of its employees and their willingness to answer questions. Animal Kingdom's staff embodied the Disney concept of fun and enjoyment well. Same as with the other zoos, also the Bioparc Valencia satisfies the visitors with its staff's friendliness and helpfulness.

#### Interactive experiences

The topic of interactive experiences stands for involvement of visitors in any sense. The Zoo Emmen engages its visitors by offering alternative walking routes ranging from an adventurous to a safe path. On the drawback, reviews express disappointment as the zoo does not provide any technical equipment such as screens or other interactive tools. In Singapore, visitors also appreciate the opportunity to walk on different trails through the zoo as well as the possibility to book a breakfast session with orang-utans. The comments on Zoo Leipzig highly laud the various ways of getting involved in the zoo experience. One construction that visitors positively remember is the "Zoo Window" that enables visitors outside the zoo to watch the inhabitants of the African savannah without paying entrance fee. Concerning Animal Kingdom, the research discovers comments that mainly focus on the safari and nature walks that engage visitors in the world of the wild. Additionally, the breakfast sessions or lunch breaks with the Disney characters are highly appreciated which indeed provide a connection to the Disney brand, but not particularly to the animals themselves. The only comment that was generated relating to Bioparc Valencia is that visitors miss interaction with animals.

*At Zoo Emmen, especially families value the newly built adventure playground "Yukatán" and also see the free walking animals as part of the zoo's entertainment.*

#### Entertainment

At Zoo Emmen, especially families value the newly built adventure playground "Yukatán" and also see the free walking animals as part of the zoo's entertainment.

However, these two aspects are the only ones mentioned. The Zoo in Singapore has indeed far more entertainment options than Emmen.

Next to several wildlife shows, visitors appreciate the feeding sessions of the animals, safaris (night and day) as well as animal rides. The offer in Leipzig is not as extensive as the one in Singapore. Here, the entertainment of zoo visitors is limited to animal shows and feeding presentations. In the same way does Valencia entertain its visitors, Animal Kingdom on the contrary offers a whole spectrum on entertainment. Visitors of all Zoos appreciate the leisure activities for the sake of the family's "we-spirit". Only visitors of Disney's Animal Kingdom mentioned the park to be a nice place for a day out with friends as well.

### 1.7.3. Physical Context

#### Accessibility

The location and accessibility of the Zoo Emmen is considered as concordantly positive. Leipzig score well in this category. Visitors are satisfied with the central location of the zoo with direct connection to the city trains and proximity to the main railway station. Disney's Animal Kingdom is indeed off the city centre, but as in all Disney parks a bus or train transport is offered that comfortably brings the visitors to the main entrance.

The Singapore Zoo consentaneously receive negative comments. Visitors complain about the location far outside the city. Bioparc Valencia did not score well in the category of accessibility. Visitors criticize that the public bus stop is far away from the entrance of the zoo and also the metro station requires a long walk before arriving at the park.

#### Opening Times

Positively highlighted is hereby the extensive opening hours of Singapore zoo, which cover day and night times. The Zoo in Leipzig is however closed to public in winter time and Animal Kingdom is negatively commented by visitors as of its early closure time. The Opening hours of Zoo Emmen and Bioparc Valencia have not been mentioned.

### Infrastructure within the Zoo

Many reviews state that Zoo Emmen challenges visitors for a long walk between the old and the new part of the zoo. For the same reason does it rarely come to overcrowding and a great relaxation is possible. The signposts are clear and written in 3 languages: Dutch, German and English. Assessments of the Singapore zoo show the same résumé concerning sign posts, which are well placed around the park. The roads and walkways are rates as beautifully designed Leipzig Zoo is commented by visitors as disabled- and children-friendly. The signs are well located and easy to read as far as visitors understand German. Visitors criticize that there are no English signs available. The general opinion about the infrastructure in Disney's Animal Kingdom is that there are too large walking distances between shows, rides and attractions. The infrastructure of the Bioparc Valencia makes a predominantly positive impression. It is argued that the park is wheelchair and buggy friendly due to paved and broad paths. Signposts give clear direction and it is easy to find a way.

### Facilities

The visitors of Zoo Emmen highlight the high amount of restaurants they can choose from as well as the many toilet facilities all around the park. Those are easy usable by disabled people and rated as extremely clean. Reviews about Singapore Zoo positively emphasize the wide range of restaurants visitors can choose from ranging from a regular burger bar to a more formal restaurant. Visitors of Leipzig Zoo commented in their reviews favourably on a broad range of restaurants, mostly self-service but with high quality and nice outlooks over the animals. However, the diaper changing rooms were rated as "disgusting". Zoo Leipzig additionally convinces visitors with numerous free lockers and hand cart rentals. Animal Kingdom's strengths concerning facilities are the qualitative restaurants that are overly rated as excellent. In contrast to Disney, visitors of the Bioparc Valencia complain about the limited variety of food with only one canteen.

### Wildlife

According to visitor's ratings, the variety and proximity of wildlife is one of Emmen's greatest strength. Some animals even run or fly free, provided that they are harmless. If possible animals are kept in herds or groups what gives the overall picture a natural touch.

Most of the comments on Singapore Zoo's wildlife refer to the variety of exotic animals they host. As one visitor indicated "90% of the animals here are new to me", so did other visitors also comment on the "interesting array of animals" or the "wide range of tropical and warm water animals". It is also positively emphasized that most of the animals are endangered species. The Leipzig Zoo offers its visitors a great variety of animals. Although there are many rare species represented, reviews highlight the fact that some typical species are missing. Disney's Animal Kingdom inhibits indeed a huge amount of animals, which are however mostly representing the African continent. Concerning wildlife's activity, people mentioned that they were more active in morning hours. Bioparc Valencia also encourages the activity of the animals by mixing several species in one area. The variety includes, according to comments, lots of rare and unusual animals.

### Enclosures

The criteria of enclosures not only include their size but also the life-like appearance. The majority of animals at Zoo Emmen have, pursuant to visitors comments, enough room to live due to large exhibits with no bars or fences. Also the Singapore Zoo and Animal Kingdom are supporting the open concept and keep their animals in large, borderless exhibits, which generate high satisfaction among visitors. Leipzig additionally pays lots of attention to design the enclosures as life-like and nature-based as possible. Some visitors consider them too small; some mention a "good size" of enclosures.

*According to visitor's ratings, the variety and proximity of wildlife is one of Emmen's greatest strength. Some animals even run or fly free, provided that they are harmless. If possible animals are kept in herds or groups what gives the overall picture a natural touch.*

### Aesthetics

In Emmen and Valencia, the cleanliness and neatness are emphasized as well as lots of remarks are made about the nicely arranged landscapes and parkways. For Singapore Zoo particularly the beautiful gardens are emphasized that present lots of exotic plants. Next to all above mentioned aspects the Zoo Leipzig adds a unique arrangement, detail-oriented design with rocks, flowers and rivers. Also the comments about Animal Kingdom underline the same aspects plus a perfect ambience.

Urgent improvement potential can be discovered in the following factors due to visitors' opinions in the height of the Entrance Price and Physical Challenge.



## 1.8. The interactive zoo experience

### Zoo Emmen

Zoo Emmen promotes its concept as a zoo without borders and fences, meaning that the focus lies on connecting visitors with the wildlife as much as possible (Zoo Emmen, 2010; Zoo Emmen, n.d.). Only natural barriers are used and the surroundings of the animals are replicated by paying great attention to authenticity. The zoo offers special events that involve the visitors actively. It can be said that visitors of the Emmen Zoo do recognize the concept of a fence- and borderless zoo, using replications and only natural barriers. Interactive experiences, as well as entertainment are appreciated but could be improved. The same counts for conservational efforts. Although visitors value the possibilities for families and children, they also consider the high prices as a drawback to the concept.

*Only natural barriers are used and the surroundings of the animals are replicated by paying great attention to authenticity.*

### Singapore Zoo

Singapore Zoo is set up in a rainforest environment and focuses on an open concept, using only natural barriers such as streams and vegetation to separate wildlife from visitors (Wildlife Reserves Singapore Group, 2012). Out of the 316 species the zoo is hosting, 36% belong to this facing extinction. The concept lays great emphasis on the protection of wildlife, the education of the public and the provision of an interactive fun experience. Additionally, shows and guided tours are offered as part of the learning experience.

In a nutshell, it can be said that the open concept of the Singapore zoo is recognized by the visitors. Visitors positively highlight the proximity of the animals and the atmosphere in the zoo. The same is true for the educational and conservational efforts which play an important role in the zoo's concept.

### Leipzig Zoo

Leipzig Zoo is a modern and innovative zoo with more than 850 different species living within six themed areas such as Gondwanaland and Pongoland (Zoo Leipzig GmbH, 2012). Recently, Leipzig Zoo released its newest concept to the public, named zoo of the future.

This concept aims at reaching a barrier-free and environmentally friendly future zoo by 2015. For children, the zoo concept includes various learning stations in which children can learn actively about the zoo and its animals, for example by comparing their strength to the strength of a gorilla (Zoo Leipzig GmbH, 2012). Summarized, it can be said that visitors recognize the efforts of the Leipzig zoo to realize the concept of the zoo of the future with no barriers. However, several statements reveal that authentic enclosures and the variety of wildlife are evaluated rather negatively. Even though, positively rated comments about its aesthetics and atmosphere show that the zoo is on a good way.

#### Disney's Animal Kingdom

Animal Kingdom is one of four theme parks in Orlando, Florida and offers entertainment and attractions based on the Disney characters on an area of more than 500 acres of landscape. The concept of the Animal Kingdom focuses mainly on entertainment and interactive experiences which is a Disney philosophy that has already been identified by Beardsworth and Bryman (2001). To sum up, the Disney Animal Kingdom's concept with the main focus on entertainment is recognized by the visitors of which some are however disappointed and would have expected more. Interactive experiences focus only to a small part on the animals themselves but this is the typical Disney concept as visitors expect it. Family togetherness and spirit as part of the parks vision are perceived positively, as well as conservation efforts which are, however, not stated explicitly by the Animal Kingdom.

#### Bioparc Valencia

Bioparc Valencia is based on the new generation concept of zoo immersion, meaning that the zoo aims at totally engaging visitors into the wild habitats of the animals (Valencia Cityguide, n.d.). There are no visible barriers, cages or fences in the zoo and only natural boundaries are used which gives the visitors the chance to immerse fully in their surrounding and to get very close to the animals (Bioparc Valencia, 2012).

#### Conclusion

All in all, it can be said that visitors of all five zoos do on the whole recognize the different predefined concepts. The Zoo Emmen puts most of its focus on the wildlife itself, Singapore zoo links interactive experiences with wildlife and entertainment, Leipzig places emphasis on themed worlds connected to wildlife, Animal Kingdom has its focus on entertainment and Bioparc Valencia embodies the conservational role.

### 1.9. Which of the researched experience concepts are useful and feasible?

By means of benchmarking the predefined criteria of all five respective zoos, this research question focuses on detecting possible strengths and weaknesses of Zoo Emmen.

#### Price

As soon as visitors perceive high value and memorable experiences for their money, they are ready to pay a higher price. People tend to compare prices to other leisure activities and judge according to the average. Discounts are perceived as a valuable service and appreciation of the visitor.

*By means of benchmarking the predefined criteria of all five respective zoos, this research question focuses on detecting possible strengths and weaknesses of Zoo Emmen.*

The Zoo Emmen generally stands, apart from Animal Kingdom, at the higher end of entrance pricing structures but indeed scores excellent in the category of extra activity as well as food and beverage payments. As about 80% of zoo visitors are families (Tomas et al., 2003), discount tickets are an important tool to target the main market.

### **Learning Experience**

The current Zoo Emmen offers mainly passive learning experiences that could appear as 'teachy' and boring. This "museum fatigue", as Olukole and Gbadebo (2008, p. 347) define it, calls for more interactive involvement of the visitor than just providing information boards to read. Leipzig Zoo gives visitors insight into behavioural experiments with monkeys which present a good alternative for Emmen Zoo to be overtaken. Additionally, Singapore Zoo educates its visitors by providing informal educational programs and information material that concerns the challenges everyone has to face when it comes to protecting the environment and saving 'our' planet. Following this direction could help Zoo Emmen to stay competitive on an international level.

### **Conservation effort**

Conducting this research, it has been found that ratings about the Zoo Emmen covered solely the perceived condition of the animals which has a positive impression on the visitors. However, as guests of Bioparc Valencia also commented on breeding programs, Emmen should put more effort on publishing and advertising its conservational actions.

### **Interactive experience**

Looking at the opportunities that Zoo Emmen offers concerning interacting experience it has to be pointed out that visitors are highly satisfied. However, in comparison with the other zoos, Emmen misses the technological part that would lead to exceeding the visitors' expectations. As stated by Cavanagh (2010) zoos make use of lightning and sounds to give the guests the feeling that they are part of the experience. An idea to start with can be seen in Disney's Animal Kingdom. Here screens are placed all through the park which provides interesting facts about the shown animals or short movies about them in their natural environment. They help to connect the visitors with nature.

### **Entertainment**

The entertainment facilities at Zoo Emmen are relatively limited and could use some improvement. One problem that has been recognized is that the playground Yukatan which is the highlight for children is not suitable for smaller kids.

Naturally, as Zoo Emmen is much smaller than the Animal Kingdom, this has to be developed on a smaller scale. This is supported by Hunt and Crumpton (2008) who state that the development of other leisure attractions have a huge impact on zoos. Beardsworth and Bryman (2001) argue that people's concern is not only towards animal welfare anymore but they are looking for a great variety of entertainment opportunities. For instance, this could be realized by the introduction of feeding trails. This would be an improvement for the visitor experience in Zoo Emmen and has been proven to be a successful attraction in the Singapore zoo.

### **Infrastructure within the zoo**

In the reviews about the infrastructure within Zoo Emmen visitors complain about the fact that it is not easy to go through with small children and as such a train could be introduced, like it is common in the Disney Parks that moves people around within the park. This could also be used by the whole family but would be especially useful for elderly people.

### **Wildlife and Enclosures**

Zoo Emmen mainly received positive feedback on the variety of animals one can see. However, some animals are kept inside and are therefore not visible for visitors. Looking at the reviews several people expressed that they felt the elephant and tiger enclosures were too small for those animals. As Zoo Emmen is expanding at the moment they should take into consideration to build larger enclosures for those animals. Moreover, during the research it has been discovered that Valencia Zoo developed mixed enclosures with animals that get along with each other which is a great success there.

To conclude it can be said that Zoo Emmen, especially with the new location, is on the way of becoming a zoo that can compete on international level.

## 1.10. Recommendations

Redefining the entrance fees 80% of all visitors are families with children (Tomas et al., 2003), it can be recommended to introduce a family pass. Next to this family pass, the introduction of a winter special can also contribute to the enhancement of visitors. Moreover, it can be recommended to print a percentage of the money that is used for conservation efforts on the entrance tickets. and introducing discount tickets for children, disabled people and students can not only help to satisfy visitors to a greater extent, but also to broaden the target group.

Another recommendation is the involvement of visitors. “Emmen Next” will be divided into three climate zones, thus it is advisable to have three feeding trails in order to shorten walking distances. The zones “World of Hot Dryness”, the “World of Moist Warmth” and the “World of Icy Cold” are used to present their animalistic inhabitants and thus, can be used for feeding trails among these creatures. A maximum of 25 people per trail should be adhered to in order to ensure the animals welfare. Obviously, the feeding trail tours have to be adapted to the feeding times of the zoo.

Additionally, informing the public about the zoo’s engagement in a breeding program can help raise awareness regarding sustainability and conservation. By exchanging animals for conservation issues with other institutions, the zoo can introduce ‘visiting animals’ via boards or screens and other advertisement. Another problem visitors faced at the zoo is the fact that many of them were

*Informing the public about the zoo’s engagement in a breeding program can help raise awareness regarding sustainability and conservation.*

not able to see the animals, as they were often hiding inside their enclosures. Therefore, it can be recommended to install cameras to the inside of the enclosures and attach screens outside the enclosures to let visitors see the animals even in times of absence, as for instance during feeding times.

Screens however cannot only be used at the enclosures itself, but the introduction of interactive touch screens throughout the zoo can boost the learning experience visitors’ have at the zoo. Moreover, hand-outs for interested

visitors are given out at the entrance so they can remember the times of the shows and other news.

Another recommendation for raising awareness for an animal’s habitat and to entertain children, are ‘sensory environmental awareness paths’. On these paths, people can feel and touch different natural materials with their feet, which are connected to several habitats of animals living at the zoo.

It is furthermore advisable for zoos to give the visitors insight into behavioural experiments with animals to stay competitive on an international level. These behavioural experiences can include having animals work with several tools or having them operate a cable pull.

Improving the zoos entertainment facilities can also enhance visitor attraction. Naturally, zoos could adapt this idea and have people dressed up as zoo animals which can also be seen in real at the zoo itself. Moreover, Zoo Emmen could consider adapting the Yukantán play area, as many people were complaining about how dangerous the area can be for smaller children.

In addition, the infrastructure within the zoo has been reviewed and recommendations have been found. One already planned development at Zoo Emmen is the introduction of a small train, connecting the different parts of the zoo. The research results of this paper proved this development as advisable, because it would be especially convenient for elderly people and families to easier navigate within the zoo. Rental stations for hand carts, strollers and wheelchairs should be available at the entrance for the purpose of easing the visitors’ arrival and journey throughout the zoo.

The size of enclosures has to be reconsidered and should be augmented by at least half its size. Building bigger enclosures can also increase the animals’ activity; this can further be increased by mixed enclosures of different species.



## 1.11. Conclusions

The quickly changing world of leisure and tourism continually asks zoos to adapt to the emerging trends of the experience economy. Whereas the traditional zoos solely dealt with educational, conservational and recreational elements, modern zoos have to face progressively changing concepts that put pure entertainment and enjoyment as their first priority. Thus, the main question of this report has dealt with how a new zoo concept can contribute to the enhancement of visitor experience for the zoos with an emphasis on Zoo Emmen.

*Modern zoos have to face progressively changing concepts that put pure entertainment and enjoyment as their first priority.*

The first research question identified to what extent the performance of the zoos meet the expectations of the visitors regarding the predefined criteria. The Zoo Emmen scored high in the categories of price for food and beverage, atmosphere, learning experience, conservation efforts, and quality of staff, entertainment and family spirit. Furthermore, the zoo meets the expectations regarding the categories of accessibility, availability, quality of facilities, aesthetics, good signage and pathways within the zoo.

Additionally, concepts of the benchmarked zoos have been reviewed and analysed in how far they are recognized by visitors. Whereas Zoo Emmen puts great emphasis on wildlife itself, the other zoos rather focus on interactive experiences, themed worlds in connection with wildlife, entertainment or conservation. Lastly, a closer look has been taken at the researched concepts in order to select the most promising and feasible ones to inspire Zoo Emmen. Several recommendations ranging from redefining entrance fees and introducing discounts to providing rental stations and information screens have been mentioned and explained, tailor-made for the zoo in Emmen. When taking these improvement points into consideration, Zoo Emmen is able to compete on an international level.

## 2. The zoo of the future

The attraction market is changing and to keep up with tourists and visitors, zoos should look at the possibilities of the future. One way to address the future is scenario planning. This chapter looks at the possible future in the zoological field which is effected by choices that are made throughout the world just as any other field or market. The problem statement for this research is to explore what are the design criteria for elite zoos and to construct and explain promising future scenarios for these zoos using techniques of scenario planning.

*The problem statement for this research is to explore what are the design criteria for elite zoos, and to construct and explain promising future scenarios for these zoos, using techniques of scenario planning.*

For this chapter, eight different experts (participants) or the so called “network of remarkable people” specialist, for example, in the field of zoos, zoo architecture and ecological developments were interviewed and asked for their opinion. Most of the work in this chapter has been conducted by former master student (MAILTS) Ria Hoozevee in Spring 2012. The following four scenarios were designed from this:

1. The 5th Generation Zoo: the combination between the experience economy and nature immersion plus a focus on the world and advocating for the importance of nature and its diversity and an ambassador with sustainable solutions;
2. The 3th Generation Zoo: a nature-like park with a commercial edge where sponsors and commercial venues are present. Media presence is visible, but also sustainability is part of the concept here;
3. Modernism Immersed: more modern functionalism than the importance of nature. Also a focus on the commercialization is present within this scenario, but the designers do keep in mind the importance of enrichment and such criteria, because they do have a function within zoos;
4. A Sketched-up Zoo: next to bits of nature in the exhibits, cartoonish paintings are also immersed into these exhibits, giving it a colourful, warm and in-depth feeling. Also the advocate role is important within this scenario as is educating its visitors about the possibilities within sustainability.

Before mentioned scenarios should keep the ideas presented within the modern day elite zoo (roles, suitability of animals, ‘panopticum’ effect, the front and back stage and the care for the animals) and the ideas within the design of new exhibits (the extend of the process, nature immersion, enrichment, exhibit rotation and measuring of success) in mind with decisions concerning the future. In all scenarios the community aspect of zoos is implicit in order to be future proof.

### 2.1. Zoos from 2013 till 2050

The first future time-frame to be discussed by Coe is between 2013 and 2050. The scenarios drawn up are concerning the the present time and near future (Coe, 2012: 4-9):

- Immersion zoos: the immersion of the habitats of the animals and the routes for the visitors in one type of design; a blurring of the borders in between. Also the use of more green is opted as a great opportunity in this scenario.
- Modern zoos: Here Coe sees big architectural structures and more green. The question, however, remains if this being greener also will result in more sustainability and being self-sufficient with energy, food and water for example.
- Virtual zoos: the first virtual zoo was created in 1994. At this point most virtual zoos are in the form of a computer game or such. This will probably develop further in the future.

### 2.2. Zoos after 2050

For the scenarios after 2050, Jon Coe gave another set of assumptions. With these assumptions, Jon Coe (2012) came up with four different scenarios for after 2050:

- Third generation conservation: This concept is discussed earlier in this chapter;
- NeoGen parks: The re-creation of extinct species through gen technology;
- Uplift movement: Human genetic engineering to optimize the ability of the animals to live next/along the humans;
- Off planet zoo: A zoo outside of earth on a different planet. This can possibly also include other scenarios in this type of zoo, as for example the NeoGen park idea (10-13).

### 2.3. Scenario Planning

Nekkers describes different methods of scenario planning in his book. There are two different starting points which lead to these different methods of scenario planning. In his point of view one can perform scenario planning from an analytical and an intuitive perspective. With the analytical perspective one starts with identifying the main uncertainties and from that forms scenarios. An advantage of this method is that the scenarios have a better foundation to start from; it provides better arguments why these specific scenarios are set up. A negative to this approach can be that it is very time consuming (Nekkers, 2011: 133).

The intuitive method starts with writing the scenarios and then looks for the main uncertainties that fit these scenarios. This method is quicker than the analytical approach but the downside is that it can lack certain dimensions and that you lose yourself too much into the story and focus on the wrong points (Nekkers, 2011: 133).

Something that needs to be considered in both methods is the chance for a wildcard. A wildcard is an event that can happen very sudden with a big impact on society and thus also on the possible scenarios (Nekkers, 2011: 150).

*Scenario planning is still a rather new subject and still needs research as to how it works and what can be seen as best practice.*

Scenario planning is still a rather new subject and still needs research as to how it works and what can be seen as best practice.

What are scenarios	What are not scenarios
Possible images of the future; Plausible images of the future; Qualitative images; Real life stories; Focused on uncertainties; Development of situations that are more extreme/radical in contrast with the present situations; An instrument for conducting a strategic debate.	Predictions of the future; Science fiction stories; Trend rapports with quantitative arguments; Scientific treatises; Focused on probabilities; Calculations and projections based on extrapolation; A readymade strategy.

Figure 5: Scenarios (Nekkers, 2011:18)

Nekkers (2011) mentions that the functions these scenarios can have are divers. The following four functions are mentioned by Nekkers:

1. Cognitive: scenarios can influence the frame of reference;
2. Communicative: scenarios can be an instrument for communication;
3. Creative: scenarios can help with coming up with new creative ideas that no one thought about before;
4. Commitment: by looking at the scenarios together, it can create commitment amongst the stakeholders (Nekkers, 2011: 33-35).

### 2.4. Interviews

Eight different subject experts were interviewed for the data collection. The different themes that were covered during the interview were as follows:

1. Present day zoos;
2. Steps in setting up a new exhibit;
3. Design criteria;
4. Trends;
5. The possible future.

One participant states that most zoos are becoming commercial entities which are more focused on sales numbers and attendance than any other part.

Some participants underlined that architects are “the most dangerous animals in a zoo” and that zoos can better focus on interpretation designers for new exhibits. While another participant describes a different process; he has been involved in many projects of exhibit design all over the world and has seen many different zoos.

*One participant states that most zoos are becoming commercial entities, which are more focused on sales numbers and attendance than any other part of the zoo.*

In the beginning of the project this participant brainstorms with people from the zoo on what the message should be that the exhibit has to send out. After that an inventory list is made based on the information that is needed for the process of designing a new exhibit.

To reflect upon the future one has to look at the current trends in the field. Those trends include:

- Increase in communication channels; the zoos have more opportunities to communicate with people all around the world and to create more awareness of the animals and nature.
- ‘Frozen zoos’ is a concept of gathering DNA from several animal species and freeze it in. This can be semen from male animals, for breeding programs or for later in the future for more technical genetic manipulation. In this way, inbreeding can be minimized.
- Sanctuaries and Reserves; some participants talk about a trend where they see more reserve-like parks or sanctuaries. According to one participant, there is already quite an amount of these sanctuaries in big cities that take in animals that are injured or that are refugees. These sanctuaries are mostly privately owned and tourism could be a potential source of funding.
- Increase in Regulations in Zoos. This trend was marked with an accident in Sea World last year, where a trainer was dragged down to the bottom of the pool by a Killer Whale and died. After this accident, it was decided that the trainers could no longer be in close contact with these animals.

In this research we try to visualize what future conditions and processes are probable. One participant describes in the interview the difference between the elite zoos and the other zoos, which are mostly in developing countries. He describes a zoo in such a developing country that performs well but is at a stage where the elite zoos were in the sixties.

The future scenarios that are mentioned here focus more on the elite zoos.

Other trends are reflected in the figure below and relate to Exhibit design, Elite zoos, Roles, Meso Trends and Macro Trends.

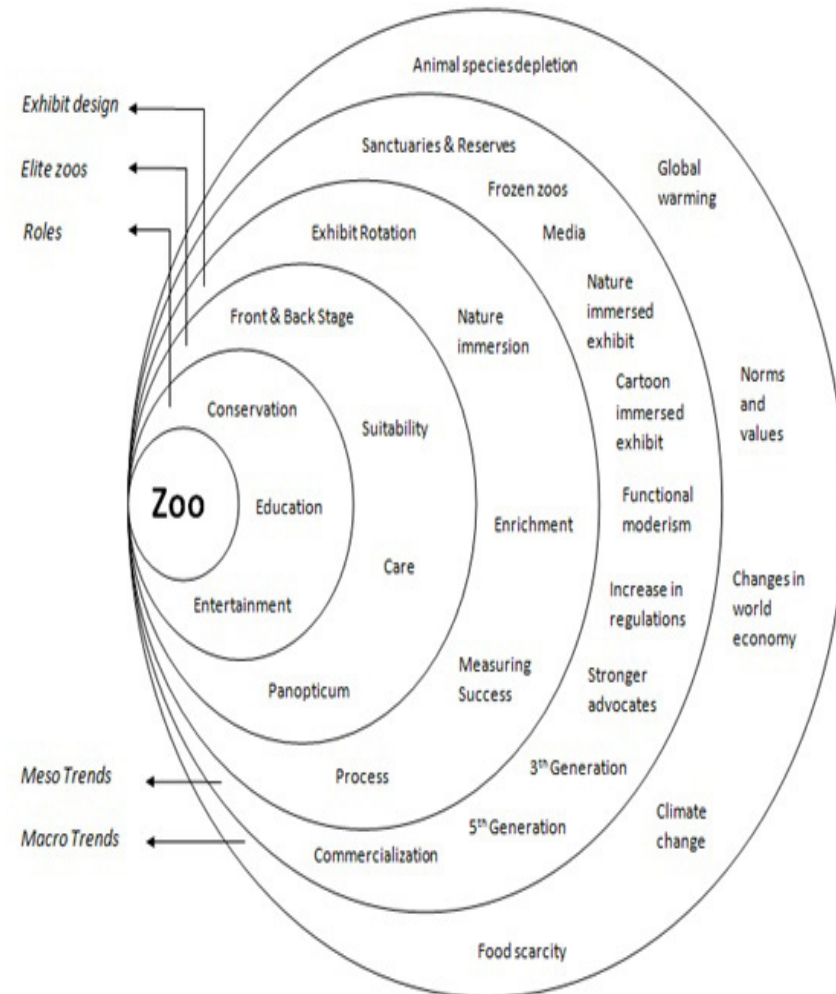


Figure 6: Trends in zoos, created by Hoogeveen based on interviews.

## 2.5. How do Modern Day Elite Zoos operate?

Zoo is a broad concept and the diversity of them around the world is big. Within the field the main distinction is made between the zoos in developed countries – the elite zoos – and the zoos in the underdeveloped countries. Zoos have certain roles within society and there is some debate on these roles, but they can basically be brought back to three main roles, namely education, entertainment and conservation. How these roles are taken on can diverse between zoos. Key is an active dialogue with stakeholders and the audience. Zoos are complex and can still learn a lot in numerous topics within the zoo.

*Key is an active dialogue with stakeholders and the audience.*

Additional research is advised to get a clearer idea of what the needs of the animals are, but also which roles the public thinks zoos should have and how these roles should be taken on within the zoo or outside the walls of the zoo.

Steps and Design Criteria are involved in Setting up a New Exhibit. The setting up and design of a new exhibit can be quite an extensive process; it depends, however, on the size of the project. It was advised by some participants to have a group working on the project from different disciplines, so a broad range of subjects is included and the exhibit complete. In the next paragraph we will focus on the design criteria of new exhibitions.

Nature is becoming more part of exhibits as are ideas of cartoon immersed exhibits and a focus on functionalism. But also working with the land is one of the many things that help in the design, which saves money and is easier to maintain. Also natural and sustainable answers are used to solve problems within zoo exhibit design like the mentioning of a natural purifying system for the water of the hippos. Care for the animals should be in balance and focused on more than the physical wellbeing of the animal.

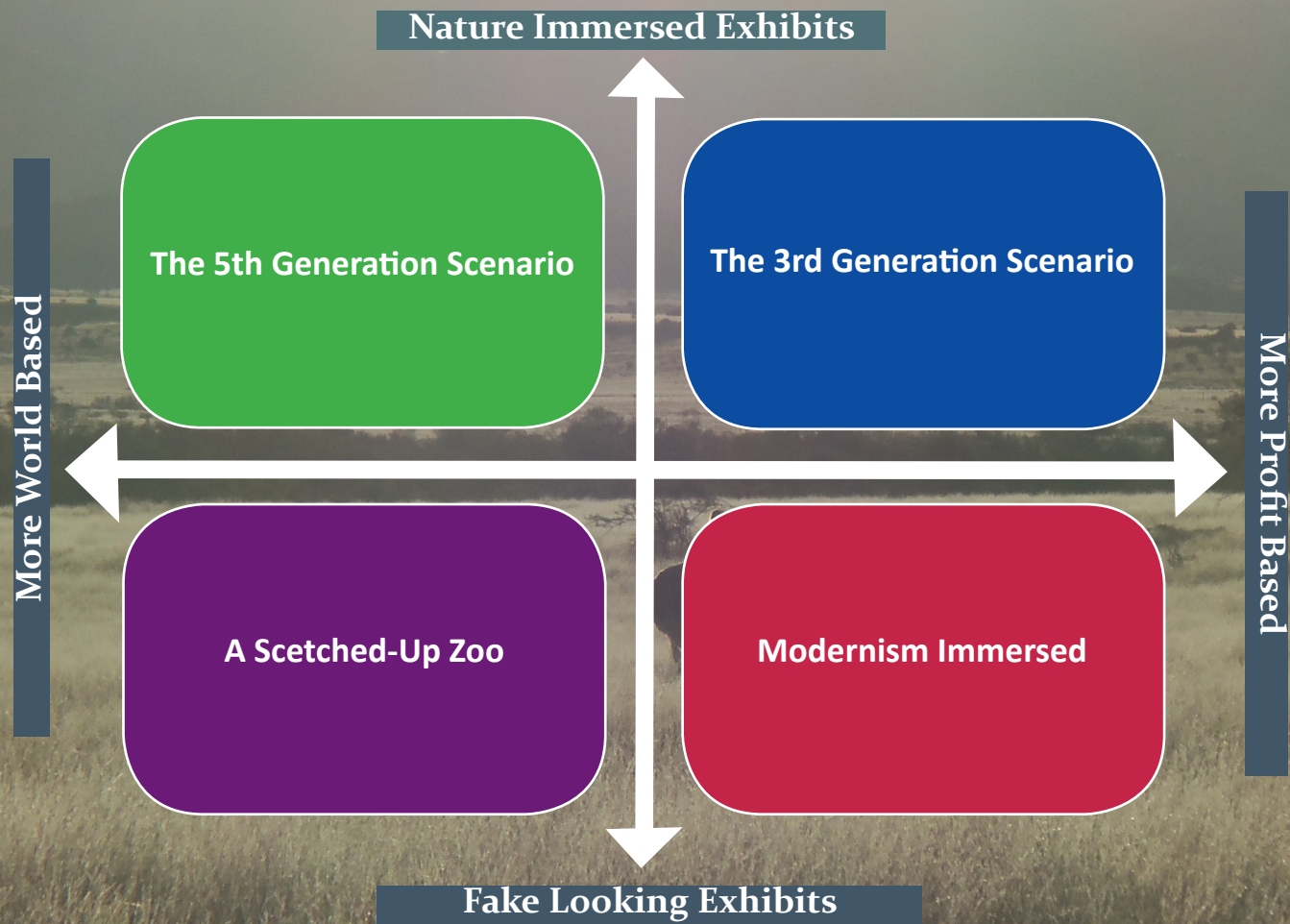
### Key Drivers / Trends for the Possible Future Scenarios in the Zoological Field.

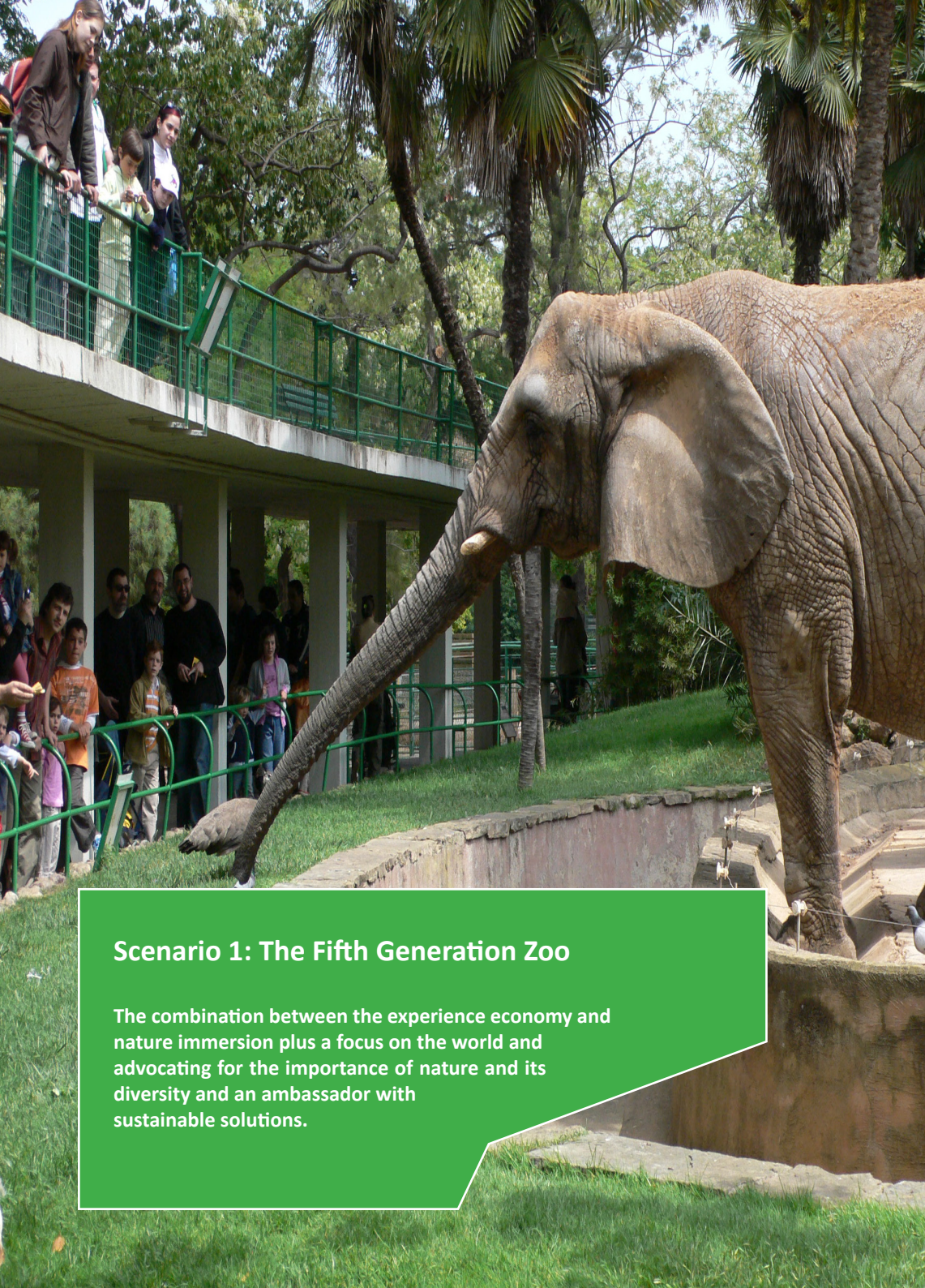
It was suggested that zoos should take a bigger role in society by expanding their conservation role with being an advocate for nature or an ambassador for conservation and to be more interdisciplinary. This could be done with an increase in media coverage or other measures in addition to seeking cooperation with other fields.

## 2.6. Possible Scenarios and the Accompanying Design

### Criteria within the Zoological Field

The participants pointed out a few possible future scenarios, one of these is the 5th generation zoo, which is about balance between the experience economy and nature immersed exhibits. There is an increase in the importance of education and the public's opinion. In this chapter, four different scenarios are presented as a vision of the future.





## Scenario 1: The Fifth Generation Zoo

The combination between the experience economy and nature immersion plus a focus on the world and advocating for the importance of nature and its diversity and an ambassador with sustainable solutions.

## Scenario 1: The Fifth Generation Zoo

### Actions and innovations

1. Build nature immersed exhibits
2. Introduce visitors to the wonders of nature
3. Set up community bases lifestyles such as: let visitors harvest their own meals and bake their own bread
4. Involve visitors in charity: how can they contribute to nature conservation?
5. Build zoos that are autarchic – self sustainable

## Detailed explanation

The fifth generation zoo is a zoo of wonder. All the exhibits are nature immersed, large, leave room for the animals' choices, makes sure that the animals are cared for in more ways than just the physical way, use enrichment and have rotation exhibits. The zoo has used bioclimatic zones and the animals from a similar landscape are kept in the same part on the zoo. But it is not just about the animals; also the visitors are introduced to the wonders of nature. They can be physically part of nature and are immersed as well, by the extra routes

*But it is not just about the animals; also the visitors are introduced to the wonders of nature.*

through the park; a sort of back route where they move through the woods, bushes and can climb trees, crawl under things, climb rope ladders and cross rope/wood bridges. They can experience the animals from different points of view.

In the restaurant at the zoo, visitors can harvest their own meals from the trees and the vegetable patches. Moreover, they can bake their own bread above a fire pit. Also the zoo undertakes homegrown food activities for herbivores. In this the wants to teach the visitors about the joy of growing your own vegetables and fruits and sell items in the store. Next to the restaurant is also an area for interactivity with children where they can play, where they can climb trees and help with the building of tree houses.

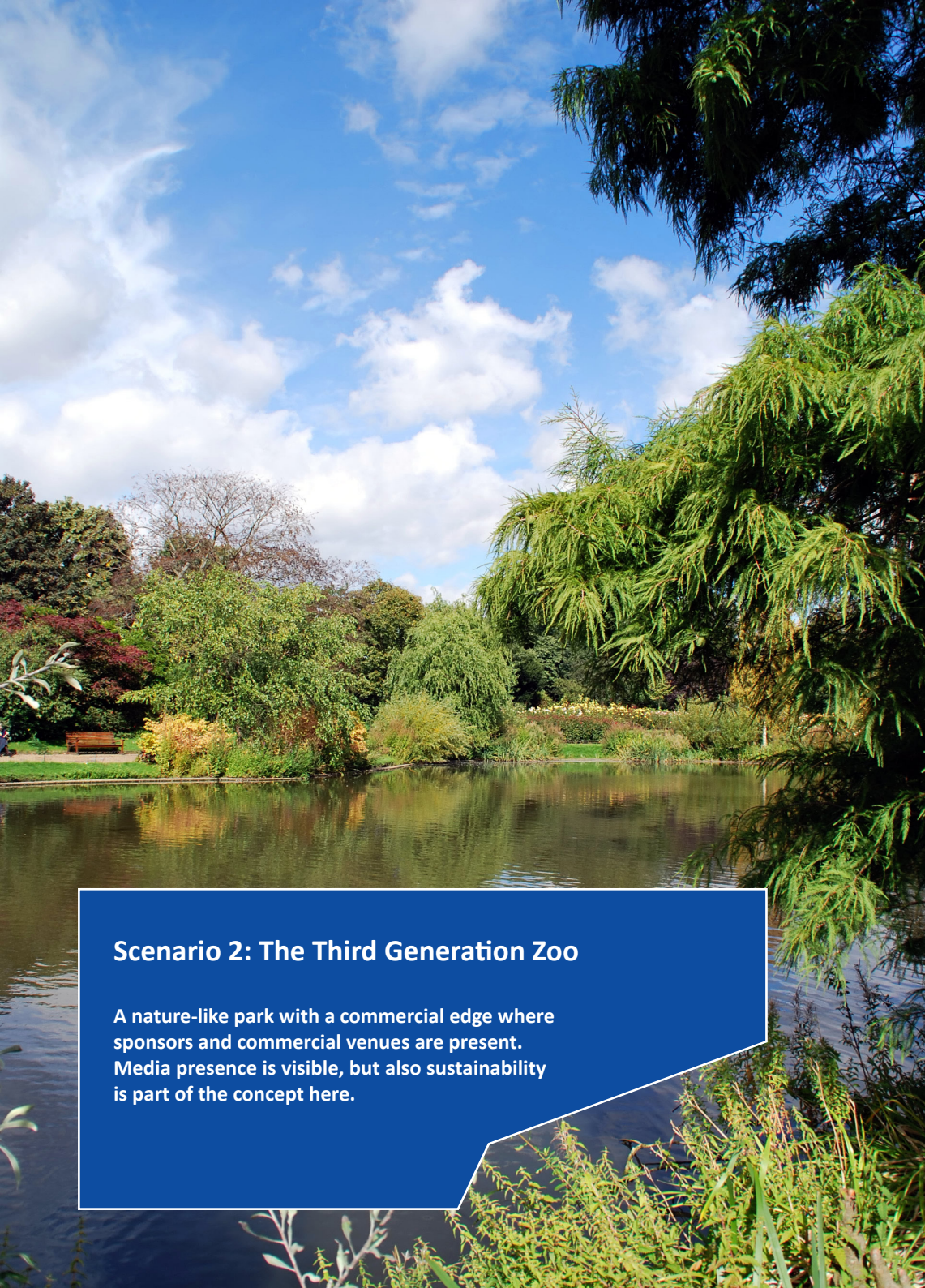
A zoo is no longer just a display of animals, it is more than that. There is a museum which shows how the earth developed. Extinct animals are on display in the form of stuffed animals or as skeletons. And extensive information is given towards how to keep the planet healthy. Moreover, there are also options for sanctuaries exclusively for animals and botanical gardens with insects, butterflies, birds and nature that the visitors can enjoy.

But the zoo also needs outreach programs. This is why extensive communication means are set up to answer questions from the visitors, give information on their projects in order to inspire visitors and the public at large to live a more sustainable life.

Zoos are strong advocates for the preservation and restoring nature to its former glory. They give tips on how to be sustainable and raise funds for conservation projects. At the exit, the visitors can choose where a part of their entrance fee is going and can donate extra if they want to these projects.

The zoos invest in self-sustainability; this is evident in many areas in the zoo like the vegy patchies but also solar power and other sustainable activities. In addition to this, zoos are involved in nature conservation at large such as placing animals back into the wild.





## Scenario 2: The Third Generation Zoo

A nature-like park with a commercial edge where sponsors and commercial venues are present. Media presence is visible, but also sustainability is part of the concept here.



## Scenario 2: The Third Generation Zoo

### Actions and innovations

1. Do sponsor exhibits, animals and events
2. Use Social Media and the power of television to edu-tain
3. Immerse visitors into nature as part of experience
4. Create safe and interactive children's activities for all ages
5. Invest in sustainable zoos and educate visitors about sustainability

## Detailed explanation

This zoo focus on nature but there is also a commercialized edge. You see more sponsored exhibits that use the name of the sponsor in the name of the exhibit, also more commercialized venues can be found within the zoo. As far as media coverage animals have their own website and TV shows are involvedn to raise funds and convince people about the importance of zoos. Of course there is still a great focus on the animals and the ability to connect with nature; exhibit enrichment, exhibit rotation, choices for the animals and such are still part of the zoo. Also the immersion of the visitors into nature is part of the experience and the ability for children to enjoy nature to the fullest by interacting with it. The zoos also invest time in keeping the visitors up-to-date on the newest tips on sustainability and how the zoos are involved in this.

*These zoos also try to keep the costs low and are self-sustainable; including solar power and home grown vegetables.*

These zoos also try to keep the costs low and are self-sustainable, including solar power and home grown vegetables. This zoos also dialogue with communities to keep the experience up-to-date and the people coming.





### Scenario 3: Modernism Immersed

More modern functionalism than the importance of nature. Also a focus on the commercialization is present within this scenario, but the designers do keep in mind the importance of enrichment and such criteria, because they do have a function within zoos.

### Scenario 3: Modernism Immersed

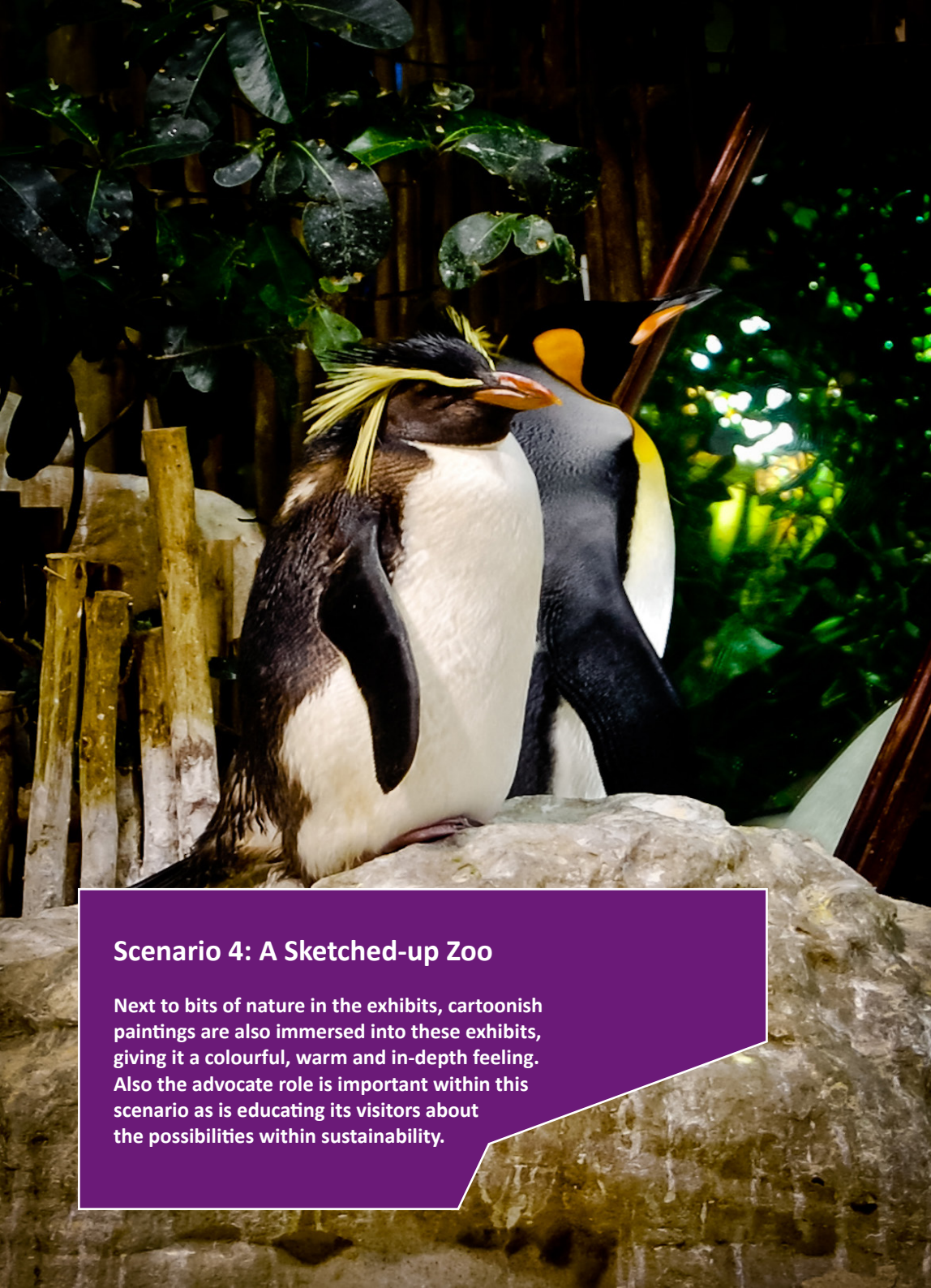
#### Actions and innovations

1. Functional zoos are losing ground in the Western world
2. Animal cages are designed to offer animals some comfort, but offer no experience to visitors
3. Standardization and functionality throughout zoo: for example fast food restaurants
4. Sponsor exhibits
5. Due to recession and limited economic resources no money to reinvest in new zoo design

## Detailed explanation

Within this scenario, nature is less important. This zoo is a manifestation of modernity with a focus on functionalism such as big glass windows between the animals and the visitors, one way glass, concrete floors and some nature. Everything has a role and a function within this zoo. The designers did, however, keep in mind that the animals need to be cared for. So, in their own way they made sure that the enclosures are enriched and that the animals have options to lower stress and compulsive behaviour. The exhibits also have a commercialized edge and have a number of commercial venues in the park, like a fast food restaurant from a familiar brand. Moreover, the zoo ventures into commercialized activities such as paid advertisement and sponsored exhibits.





## Scenario 4: A Sketched-up Zoo

Next to bits of nature in the exhibits, cartoonish paintings are also immersed into these exhibits, giving it a colourful, warm and in-depth feeling. Also the advocate role is important within this scenario as is educating its visitors about the possibilities within sustainability.

## Scenario 4: Sketched-up Zoo

### Actions and innovation

1. Create a social context of staff giving explanations to visitors
2. Be ambassadors of nature and advocates of conservation
3. Involvement in (international) conservation projects
4. Have extension projects in which visitors are educated online or within school communities
5. Do include museums or educated about healthy living

## Detailed explanation

This zoo is an artist's play field; many exhibits include nature and nature themed murals to create a staged authenticity. There are zookeepers that give interpretations of what the animals do and more information on their specifics. These educational activities are developed to teach visitors about nature, conservation and sustainability. Zoos in this scenario are also involved in conservation projects outside the zoo; this is why they also try to raise money for nature conservation and make the visitors aware of the importance of these projects. Zoos try to educate the visitors in the broadest sense of nature including museums and vegetable patches .

These zoos initiate change in the habits of the visitors to a more sustainable way of living. Just visiting the zoo wont be enough. This is also why the zoos have an extensive outreach program with interactive websites.

These zoos want to be self-sustainable and to show the visitors how it can be done. Within this context it is also important to keep in mind that the animal collection needs to be enduring as well as how they manage the zoo (heating of the buildings, recycling, solar power, etc.).



## Wildcard

These scenarios give an overview of how zoos can be in the future. However, participants also mentioned the growth in regulations on how to work with the animals in zoos. These regulations are mostly expanded when accidents happen within zoos. With a growing importance of crowd management, security and anti-terrorism measurements we might see an increase in regulations.



## 3. Zoos in the Internet domain

This chapter assessed the content of Zoo Emmen's website (spring 2012). The research subjects are different zoos in the Netherlands as well as internationally. It will indicate critical success factors for websites and conclude with the Do's and Don'ts in the development of online zoo websites.

How can zoos, with an emphasis on Zoo Emmen, develop their website, considering the graphics and layout? What are the do's and don'ts found in layout and graphics? Websites that have been analyzed include:

- Animal Kingdom
- Basel Zoo
- Beauval Zoo
- Berlin Zoological Garden
- Burgers Zoo
- Bronx Zoo
- National Zoological Gardens of South Africa
- Ouwehand Zoo
- Singapore Zoo
- Schonbrunner Zoo
- Smithsonian National Zoological Park
- Toronto Zoo
- Zoo Emmen

## 3.1. What are the Do's and Don'ts found in layout and graphics?

### 3.1.1. Do's

#### Webcams

The use of webcams is a convenient way to get people acquainted with the animals and to associate with it. This is partly done at the Smithsonian National Zoological Park. Especially with the birth of animals as this will attract many visitors. When they see the new animals or animals during fun / crazy events may become interested.

#### Breadcrumbs

People like to know where they are, this is not different in the virtual world. It can easily be created by using so-called "Breadcrumbs". Using it you can see where they are and how they got there. For the user, this will be clearer what the website more user-friendly makes for the visitors.

#### Font and colour

By assessing the zoos' web sites there are many different colours, fonts and formatting. The friendliest atmosphere emerged at sites with a green font colour. This colour also fits in a zoo and combined with the right font makes for a quiet reading experience. Known fonts: Arial, Courier, Times New Roman, Verdana, Comic Sans MS. Furthermore, it is an advantage to have the possibility to adjust the font size. One also has to look at the layout in the background. This should not be too busy; just inviting and attractive. The style of the font colour and format results must remain uniform across the website and if possible also used social media page (s) used.

#### Multilingual

A multilingual website not only looks professional, but also ensures that visitors feel more at home on the website. When a site is only in French view, someone who knows no French would drop out faster than if the site is in English. A multilingual website is therefore a must to attract tourists.

### **Plan your trip**

On the website of Bronx zoo is a page where you can plan your trip to the zoo. The page displays the hours and arrangements again so that people immediately have an overview of the possibilities to visit. Furthermore, there are directions offered on the page so that all the information concerning the routing, planning and buying of advanced tickets are centralized.

### **Online Shop**

An online shop, or a shop, is easy for consumers and visitors. In this shop, various products are purchased. These include online ticket sales, arrangements and souvenirs. The link to the shop should have a prominent board on the website, such as the top of the header. When deploying an online store, make sure it is up to date in terms of prices and items to avoid confusion.

### **Important Information**

Ensure that important information, such as the route and contact information is at all times displayed on screen. This may be at the bottom of the page, but it is preferred generally to the top of the page to do so. Here people can find the information the fastest.

### **Special kids section**

Although most zoos have things organized for children in the zoo itself most zoos have no children's section on the website. However, special attractions for children are an asset for a zoo and should therefore also be shown on the website. Moreover, on this interactive website section can be put things like games or movies for children.

### **Movies**

Movies are a useful tool to stimulate people to visit a zoo. You can make people curious and get acquainted with the animals. Think of short films from the zoo animals as they feed, are hunting or other exciting or sweet moments.

## **3.1.2. Don't's**

### **Too big buttons**

Do not use too large buttons on the website. Large buttons scare off visitors to go to the website. Also take large buttons lot of space on a page and the attention is distracted from more important things like contact information and ticket purchase. The opposite should not! Too small buttons are not discoverable and not child friendly.

### **Flash**

It is not advisable to make use of Flash technology on the web page. The disadvantage of using this is that Flash is not everywhere can be played.

### **Specialized pages**

Giving information about the animals is not a luxury on a zoo site, however, one must not overshoot. When an animal page overloads visitors with jargon, it scares them off. These people look no further than the website, and the chance is smaller that they come to the zoo.

### **Background**

A background is important for a website. If it is too boring, then you can look no further. Is the background too busy, then you deter the visitor off. This should mainly be remembered when using photos as background. Tip: Make them transparent.

### **Look and Feel**

Good Look and Feel of the website is of great importance. In the Look and Feel right people feel at home and they will continue to search for information. It is important that the Look and Feel of the organization is unique. When the look and feel is taken from another website one will notice this and the zoo may be lower in value estimate. It will be better ads recognize as being of Emmen Zoo when it has a unique look and feel.

### Pictures

Pictures are fun and useful for padding the web pages. However, if one decides to use a lot of images, one must be careful that it does not prevail. Too many images get attention from the text and can make visitors feel that they have seen everything.

### Scrolling

Make sure that people do not have to scroll the page to fully see. This ensures trouble people are not willing to do. One must go out of the laziest kind of people, everything should be as easy as possible.

### Charging time

Another important point is the loading time of a page on the website. People are accustomed to pages within one to two seconds is loaded and expects. Takes longer, the enthusiasm for the leaves fall off and watch one will even drop out.

## 3.2. The usage of Social Media

*The use of social media such as facebook and twitter is becoming increasingly important.*

The use of social media such as facebook and twitter is becoming increasingly important. The icons of these social media sites must be clearly displayed and clickable on the website of the zoo.

On facebook news, events and specials can be placed. There must be a good balance on what can and cannot be posted. Large and important news must be posted. A good policy is needed to prevent spamming and disturbance.

On twitter news items can be posted, possibly with a link to an expanded version of the message. They can also react to the tweets of other users who talk about the zoo. Thus an attempt is made to create greater engagement with the visitors.



## 3.3. Conclusion

This chapter looked at the multi-media presence of known and successful zoos both in the Netherlands and beyond. The various zoos all have different strengths and weaknesses in the websites.

Their sites were evaluated and explored by the design criteria. These must be taken into account when developing a website. Zoos would need to have social media presence, when this is done properly and regularly updated it adds to the online experience. Up-to-date events, births and deaths of animals, or other events will be displayed on the website. This will all improve the interaction and experience for the website visitors.

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