



XR CONSULTANCY SERVICES


BGRS



XR MEDIA

19 August 2017

BGRS



This document is to outline the expectations of Nova XR Media while retained by BGRS, including hours, deliverables and consultative advice. Generally, Nova XR Media is to provide beginner training to BGRS on XR hardware and software, advise on holistic business and production strategy, and to execute the pre-production of Unilever's Rotterdam Pilot program.

Offer of consultancy services to expire September 15, 2017.

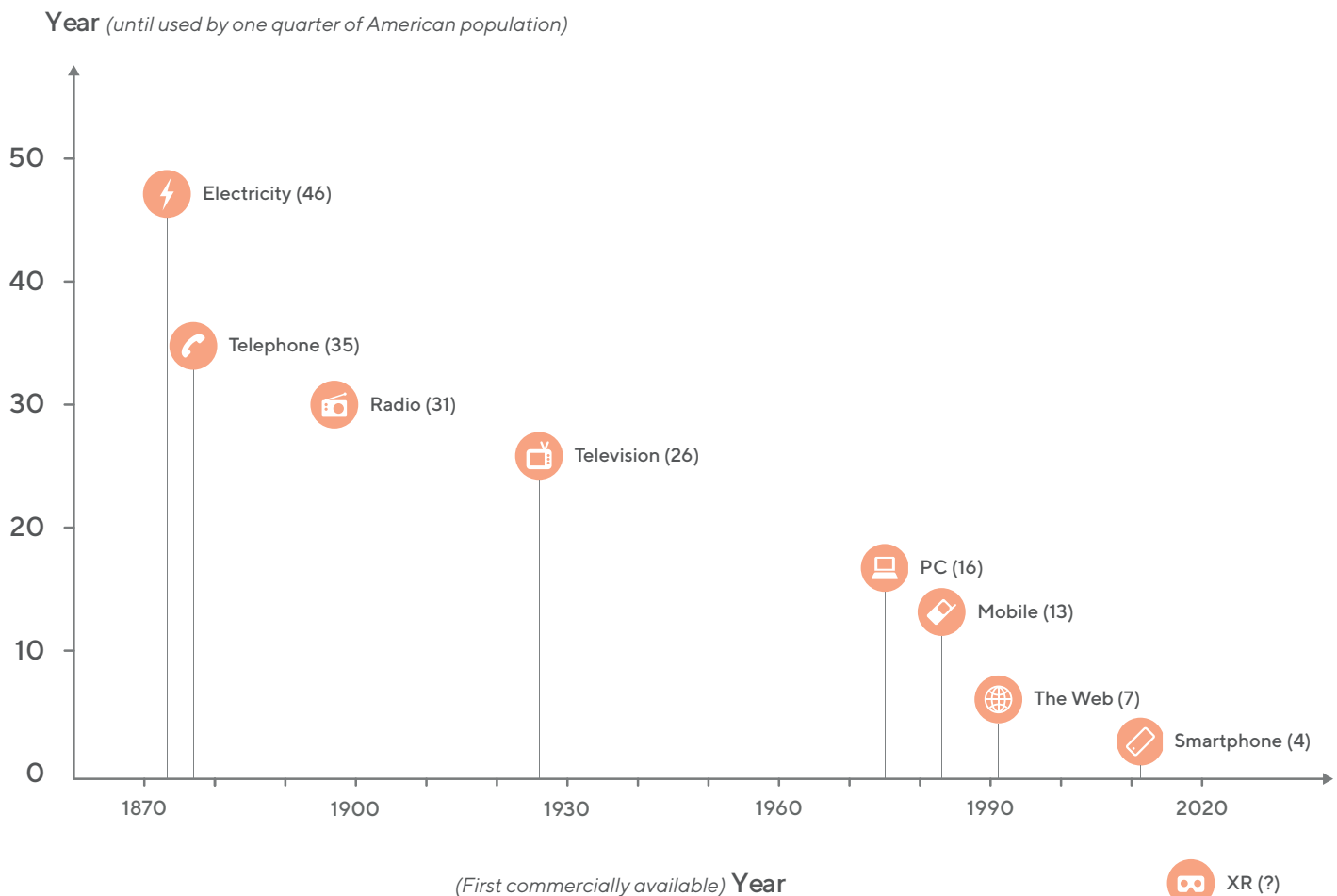


XR Market

Virtual Reality has a bright future. From hospital rehabilitation centers to Hollywood studios immersive technologies are revolutionizing how we engage the world. Today, VR is poised to forever change the way we communicate, interact and live.

Throughout history, new media-technologies have disrupted markets and catalyzed economic growth. We adopt such innovations at an accelerated rate. You can expect twenty-five percent of the US population to have AR/VR in their homes within the next 24 months.

Technology adoption



Source : Economist.com

Real Estate

Quick to adopt XR technologies, renters, developers and investors alike benefit from virtual home-building. While renters enjoy modeling interiors, developers can seamlessly communicate designs and investors can envision the structure in it's entirety before a project even breaks ground. These practices make for major cost savings. Productions range from \$500 for still 360° photo to \$10mm+ for the fully programmed model sky scraper.

«Technology is changing rapidly, but we think the use of virtual reality will reshape and transform how new homes are designed, marketed and sold,»

- Tim Costello, founder and CEO, Builder Homesite Inc. (BHI)

Tourism destinations

National ministries (tourism/trade divisions) are developing content that let's us soar through the sky like an Olympic ski jumper (Korea Tourism Office, ~\$100k), hang out back stage with Sir Paul McCartney (Visit Britain, ~\$1.5mm) or swim the crystal clear Caribbean alongside sting rays (Cayman Islands, ~\$300,000). These organizations are finding immersive media engages travelers and influences agencies more effectively than any media prior, and has more robust analytics to prove return on investment.

«Before, travelers just had a brochure or information on the website to inform their choices. Virtual reality allows them to get a true sense of the hotel and the excursion they can go on. It's been a real game changer for us all»

- Marco Ryan, Chief Digital Officer, Thomas Cook

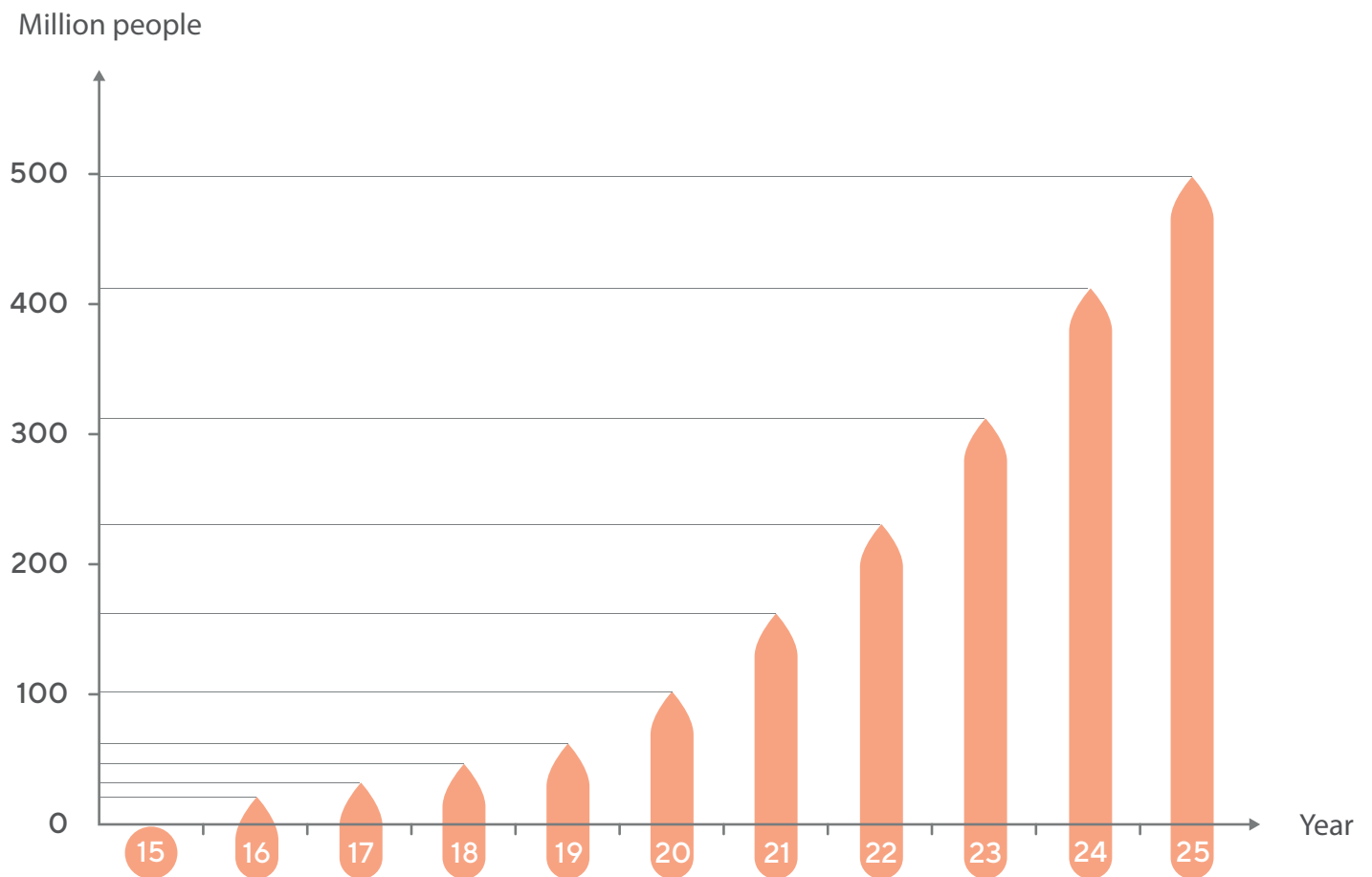
«...[Virtual reality] let's our travel trade and media partners experience our destination in a new and unique way that has not been possible before»

- Marsha Walden, CEO, Destination British Columbia



XR headset sales

(Source: Piper Jeffray estimates)



“More than 150 companies in multiple industries, including 52 of the Fortune 500, are testing or have deployed AR/VR solutions”

- Deloitte LLP internal analysis

Strategy

Objective

Consult BGRS on immersive media technologies (XR) such as virtual reality.

- Strategize how to leverage XR tech to inform assignees more about host cities prior to travel. We will increase preparedness and decrease workloads for people at post.
- Simplify complex productions and technologies. BGRS will learn to create and deploy VR content with their existing global network.
- Integrate XR gradually to improve BGRS's logistics models. We will maximize effectiveness through high quality and memorable experiences.



Challenges

- 1 The pace of change in the industry is slow
- 2 BGRS is very green to the technology
- 3 Delivering a low cost solution with a significant impact
- 4 Delivering the «Wow-factor» Unilever is demanding
- 5 Developing a scalable logistics model
- 6 Creating content with DSPs, education curve is ~2 months
- 7 Developing BGRS's logistical tech front while gradually passing on costs
- 8 Replacing humans and assignee work at post
- 9 Travel permits and documentation
- 10 Content storage + transfer
- 11 Character engine for travel guide
- 12 Evolving brand in changing media landscape
- 13 Developing beyond «trendy»

Solution

Train BGRS on XR

BGRS to be fully up to date on technologies including hardware, software, and theory. BGRS will learn about 3D modeling programs, game engines, capture equipment, middle software, and more of the programs, skills and frameworks that make VR.

Design a logistical framework

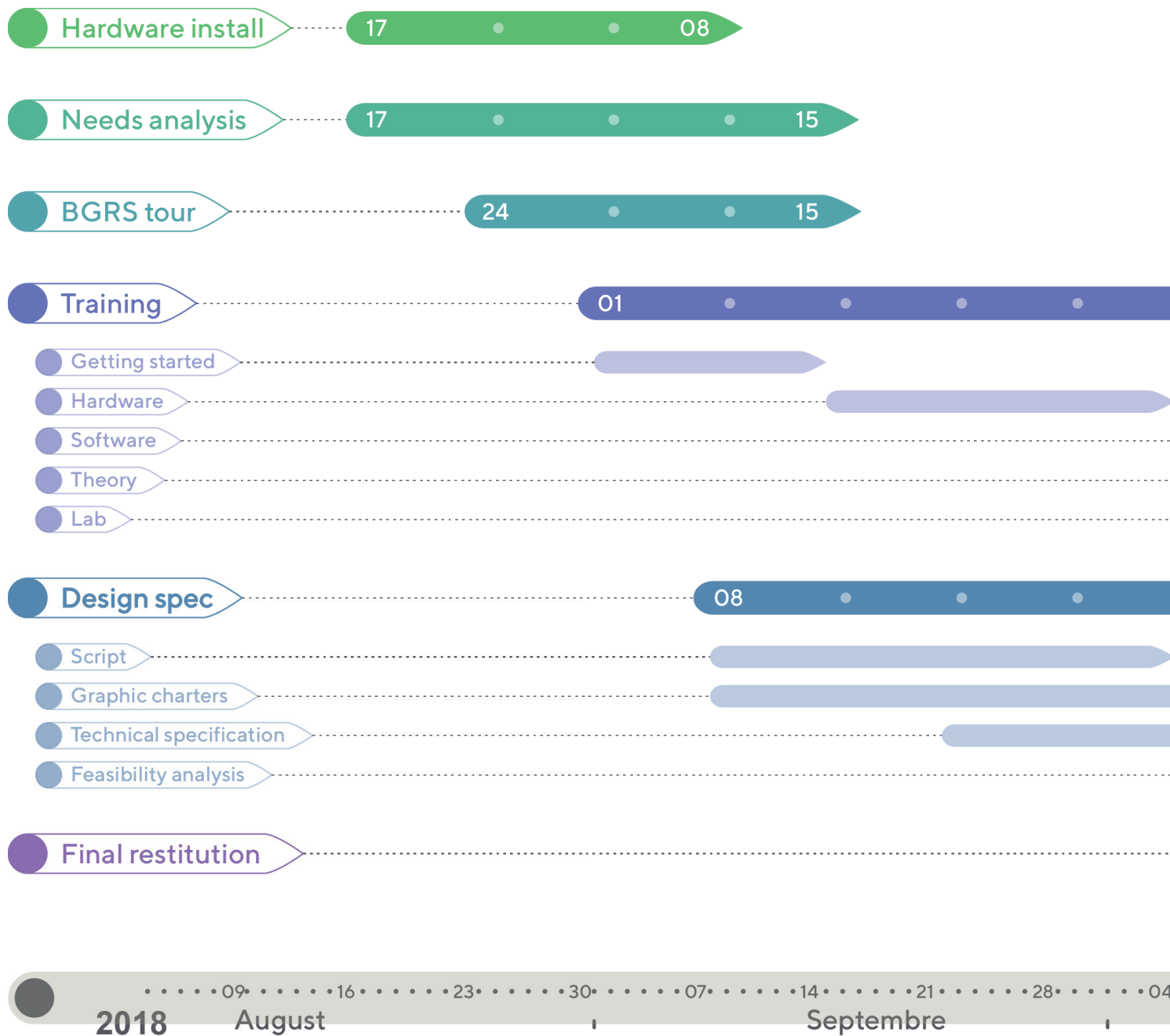
Framework to make content creation, simple, quick and easily deployed. The need for client buy-in will be small to start and grow over time as our software becomes more robust.

Develop a state-of-the-art VR experience

Unilever's Rotterdam pilot development will reinforce their progressive reputation and test the feasibility of a full global mobility VR platform solution. This solution can be exclusive to BGRS, and potentially licensed to other developers.

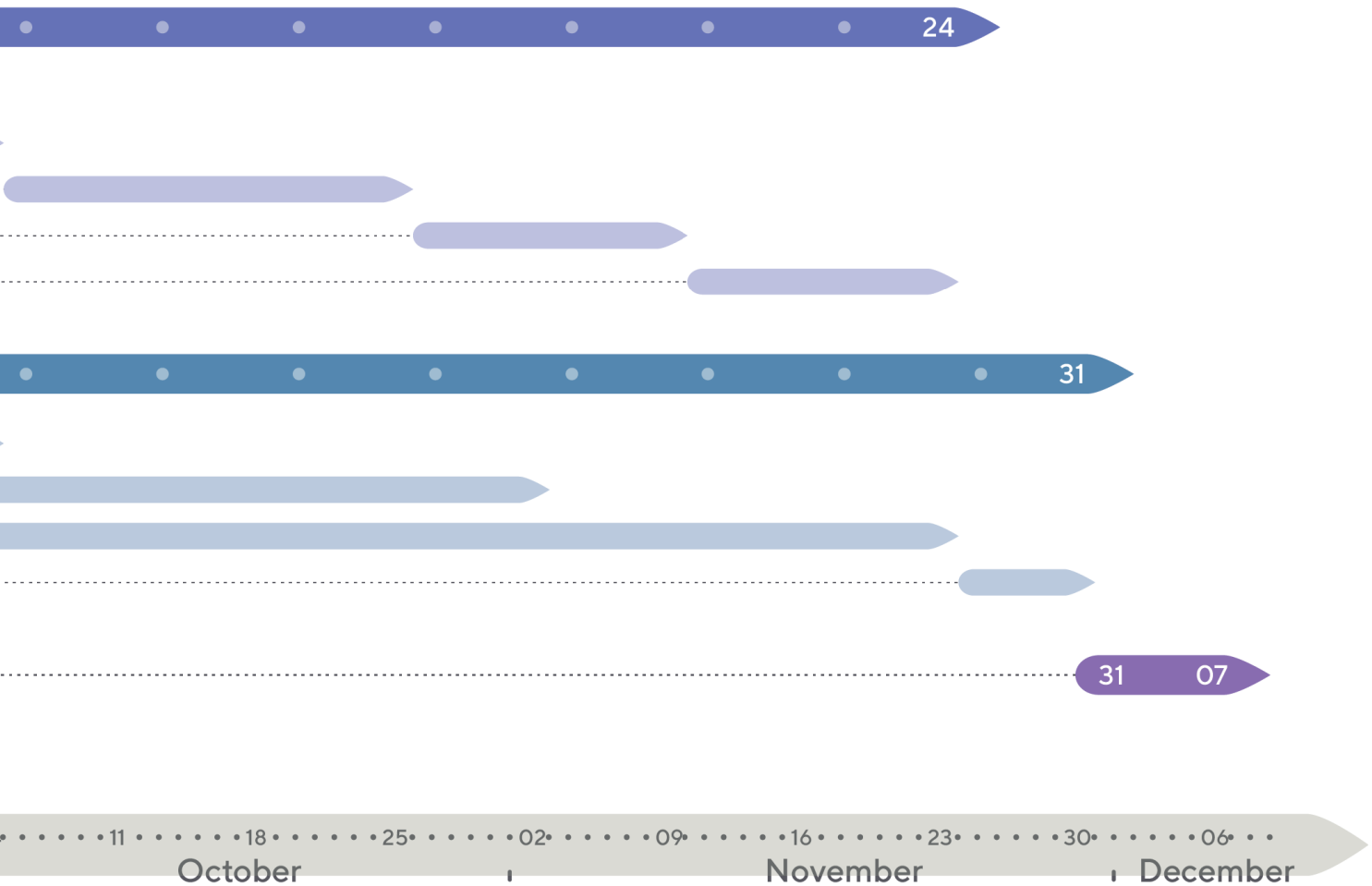


Training and Production Timeline



Execution

Nova XR will install the latest VR equipment, from a custom built PC with a powerful graphics card to a top-of-the-line headmount, fully equipping BGRS to dive in. Nova XR Media will train BGRS in weekly programs to position you ahead of your competition. From matter experts to implementation, together, we will learn about hardware, software, strategy and distribution in this new era of media. You will be experts in no time!





Deliverables

Installation

Hardware	Video graphics card :	GeForce 1080x
	Processor :	Intel i7 quad core
	Head mounted display :	HTC Vive
	Position tracker :	Valve lighthouse
Software	Operating system :	Windows 10
	Content platform :	Steam
	Modelling tool :	Blender
	Graphic tool :	Photoshop
	Game engine :	Unity

XR Training

Training your team to understand, operate, and troubleshoot VR will be critical to success. Presentations and supporting documents will be periodically delivered to your department including, but not limited to, the following :

- What is needed to create VR in terms of hardware and software
- How to integrate VR in your existing systems to better assist your clients
- How to handle and troubleshoot VR hardware and software
- The limitations of the technology and latest breakthroughs
- How to create your own VR content

Training breakdown

Introduction

- Installing hardware and software
- Downloading and playing apps
- Upgrading and maintenance

Hardware

- PC and video graphics cards
- Recording and capture equipment
- Headsets, controllers and sensors

Software

- 2D/3D modeling programs (Photoshop, Blender)
- Game engines (Unity, Unreal, Cry)
- VR web browsers (WebGL, Chromium, Nightly)

Theory

- Optics, 3D audio, ultrasonics
- UX and UI (User experience, user interface)
- Business landscape (Facebook, Samsung, HTC, Steam, Play Station, *et cetera*).

Lab

- New skills in practice



Optimizing Existing Partners

We will meet with DSPs and see how best to put them to work. By understanding their skillsets, namely in the content they create, we will establish ways in which they can contribute and reduce overall costs.

Environmental Design

We will assist you in defining what to reproduce in VR, and how, so that your clients enjoy the most realistic immersions possible. Training sessions at BGRS will in part construct the pre-production spec build that BGRS can use as a call for tender.

UX Analysis

User experience is vital to any product and because of the sensitive nature of immersion, it is even more critical in VR than most other media. We will help you understand the possibilities offered by adding a third dimension to your digital solutions.

Technology Report

A technical report will be provided to your staff nearly midway into the pre-production phase. The programming languages we anticipate are C#, C++, Javascript, WebGL, Python, and SQL.

Scripted Story

Your clients will enter and leave a virtual place according to a story line. How we deliver this journey will be no mistake; the story will be compelling and memorable. With your input and guidance throughout, we will bring them on an exceptional journey.

Full Specifications

Based on our three months of consultancy, education and testing, we will deliver a ~50-page specification defining:

- User interactions in the VR world
- Assets to be modeled
- Hardware required
- Integration with the existing systems

Graphic Charters :

- 3D models
- Brand
- Interface
- Integration

Tech Specifications :

- Game engine
- Physics engine
- Character engine
- Asset integration
- Interaction handling
- Script implementation
- Integration with existing systems
- Database management
- Networking
- WebVR integration



Schedule of deliverables

Week	Deliverable	Client Action
1	Training manual	\$40,000 payment
2	VR installation	Be VR ready
3	Needs analysis	Introduce Nova to DSP
4	Intro to VR (training)	-
5	-	Script input
6	-	-
7	Hardware (training)	Design input
8	Storyline	-
9	Tech report	Approve storyline
10	Software (training)	-
11	Environment design	Approve design
12	Theory (training)	\$20,000 payment
13	UX report	UX review
14	XR lab	XR lab
15	-	Feasability review
16	Full specification	Green-light production

Agile Development

2017

Familiarize with technology and pre-produce Unilever's Pilot content. Once BGRS is fully trained and understands the technologies, we will design the look, feel and general sensations of our planned experience. With an agreed upon vision, a script will be written and scenes will be sketched. We will then introduce technologies and develop a production schedule.

2018

Produce and launch our *Pre-Move Orientation Pilot*. Assignees will journey on an exceptionally high-quality simulation of the host city. They will shop the downtown, design home interiors and visit schools to learn first hand what life will be like in Rotterdam. After verifying a successful pilot by measuring the satisfaction of users, we will expand development to additional select cities.

2019

Scale the pilot program to be multi-city, building on the measures of assignee satisfaction. Further, we will implement a virtual AI guide to auto assist assignees as they explore. These guides will be able to accurately respond to any request related to the experience.

2020

Increase success rate of assignments. Through VR analytics we will better judge the likelihood of a successful assignment. Understanding that assignments likely fail due to one of two reasons, we will monitor behaviors, attitudes and expectations from the beginning to ensure more and more success.

2021

Convert software into smart-glass AR experience for assignees to be guided through the physical city. They will be hosted by the virtual guide who can explain surroundings in real time, and remembers the assignees from years prior.

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