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| <p>ESOCast Episode 29: Running a Desert Town</p>  |   |
| <p>00:00<br/>[Visuals start]</p> <p>[Narrator]</p> <p>1. The Atacama Desert in northern Chile — one of the driest and most hostile environments in the world. Under the blazing Sun, only a few species of animals and plants have evolved to survive.</p> <p>Yet, this is where the European Southern Observatory operates its Very Large Telescope. Running this technological oasis in the barren desert, and making it a comfortable place for people to live, poses many challenges.</p> | <p>Images:</p> <p>Plain desert</p> <p>Paranal seen from distance</p>                    |
| <p>00:42<br/>ESOCast intro</p> <p>2. This is the ESOcast! Cutting-edge science and life behind the scenes of ESO, the European Southern Observatory. Exploring the ultimate frontier with our host Dr J, a.k.a. Dr Joe Liske.</p>   | <p>ESOCast introduction</p>   |
| <p>00:59<br/>[Dr J]</p> <p>3. Hello and welcome to the ESOcast.</p> <p>Cerro Paranal, in the heart of the Atacama Desert, is one of the world's best sites for observing the night sky.</p> <p>But operating an observatory with more than 100 staff in such a remote and isolated place poses a real logistical challenge; it's like running a desert town.</p>  | <p>Dr J in studio, on screen:</p> <p>Paranal observatory</p> <p>Paranal observatory</p> |

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| <p><b>1:25</b><br/> <b>[Narrator]</b><br/> 4. Everything that is needed to make this Mars-like landscape a haven for people has to be brought in from far away.</p> <p>The most essential delivery to the arid desert is water. The observatory needs up to 70 000 litres of water each day, and literally every drop has to be brought in from the town of Antofagasta, which lies about 120 kilometres away.</p> <p>Everyone at the observatory is careful not to waste water, and it is recycled as much as possible.</p>  | <p>Water truck</p>   |
| <p><b>02:03</b><br/> <b>[Dr J]</b><br/> 5. In many ways, the Paranal hotel, called the Residencia, is the heart of the observatory. This is where people come to relax and escape the harsh desert environment and, very importantly, this is where the canteen is.</p> <p>Now, the quality of the food is absolutely crucial to everyone's mood and motivation, and so the catering staff at the canteen are working very hard indeed to keep everyone happy. Sometimes, they even dish up a barbeque.</p> <p>But whatever they do, they always have to plan well ahead because they can't just pop down to the shops. The nearest food suppliers, just like everything else are about 120km away.</p> | <p>Dr J in studio, on screen:</p> <p>Residencia</p> <p>Canteen</p> <p>Barbecue outside of Residencia</p> |
| <p><b>02:47</b><br/> <b>[Narrator]</b><br/> 6. Once a week, an important transport arrives at the Residencia, bringing in all the food needed to feed 100 people. Throughout the year some 200 tons of food are brought to the observatory.</p> <p>The kitchen staff must plan the meals carefully and make sure that all the goods that are needed are available on site, as there can be no last-minute shopping trips for this kitchen.</p>  | <p>Arrival of food truck</p> <p>Kitchen team at work</p>   |
| <p><b>03:22</b><br/> <b>[Dr J]</b><br/> 7. Now, the remote location of the observatory also means that it has to generate its own power.</p> <p>About two megawatts are required to run the whole observatory. That includes the telescopes, the cooling of the domes, the other technical facilities, as well as the hotel.</p> <p>In addition, to ensure the smooth running of the facility it's imperative that the power supply is</p>  | <p>Dr J in studio, on screen:</p> <p>Paranal observatory</p> <p>Power plant</p>                          |

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| <p>reliable.</p>  |  |  |
| <p><b>03:50</b><br/> <b>[Narrator]</b><br/>       8. The power plant at the Paranal Observatory.</p> <p>The plant is serviced at regular intervals to guarantee trouble-free operation. Like water, the gas needed to run the plant has to be brought in from the town of Antofagasta, and deliveries are made every other day.</p> <p>In the unlikely event that there is a problem with the electricity supply from the main power plant, a back-up supply from diesel generators can be used.</p>  |  | <p>Power plant</p> <p>Diesel generators</p>  |
| <p><b>04:30</b><br/> <b>[Dr J]</b><br/>       11. Seeing Paranal from afar, amidst the stark desert landscape, it's incredible to think about the 100 people who live and work here.</p> <p>Despite all the amenities life in a desert town is clearly a challenge.</p>   |  | <p>Dr J in studio, on screen:</p> <p>Plain desert with observatory in visual context</p>                             |
| <p><b>04:49</b><br/> <b>[Narrator]</b><br/>       12. There is a constant flow of people arriving and departing from the observatory. In addition to the ESO staff about 2000 guests, such as visiting astronomers and journalists, are accommodated every year. The associated logistics are hard work for the staff.</p> <p>A car is serviced at the Paranal Observatory. Cars play an important role at the observatory, as the astronomers and engineers often need to drive several kilometres between the Residencia and the observing platform of the VLT. The car fleet is serviced at regular intervals by mechanics.</p> <p>Paranal also has its own petrol station — the next nearest filling station is some 100 kilometres away.</p> |  | <p>People arriving at the observatory</p> <p>Administration at office</p> <p>Car service</p> <p>Gasoline station</p> |
| <p><b>05:49</b><br/> <b>[Dr J]</b><br/>       13. As the Sun sets over Paranal, it's time for us for us to leave the observatory. ESO has created a technological oasis in the barren Atacama Desert — ultimately it's a window to the universe and astronomers from all over the world come to enjoy the view.</p>   |  | <p>Dr J in studio, on screen:</p> <p>Sunset at Paranal</p>   |

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| <p>This is Dr J signing off for the ESOcast. Join me again next time for another cosmic adventure.</p> | <p>Celestial timelapse</p>   |
| <p>06:11<br/>[Outro]</p>   | <p>ESOcast is produced by ESO, the European Southern Observatory.</p> <p><i>ESO, the European Southern Observatory, is the pre-eminent intergovernmental science and technology organisation in astronomy designing, constructing and operating the world's most advanced ground-based telescopes.</i></p> |

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