## **BEYOND ATKINS T Free Download**

Beyond Atkins. Atkins 20, Phase 1: Induction. Going Beyond Atkins.





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Doug Markham

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Our faith is not entirely misguided. It's now clear that carb-rich foods can inflate appetite and foster type 2 diabetes, and that low-carb diets promote short-term weight loss. But healthy eating is not quite as simple, or as boring, as living on fat and protein. The truth is, you can have your carbs and eat them, too. You just have to know how to choose them. When Atkins came out against bread, potatoes and pasta 30 years ago, mainstream nutritionists dismissed him as a crank. Fat was the demon of the day, and carbohydrates were seen as their exorcist. But many experts now believe that Atkins was at least half right in condemning carbohydrates. Last year five well-designed clinical trials indicated that low-carbohydrate diets were as good as low-fat diets--and in most cases better--for helping very overweight people shed pounds quickly. Study participants stuck better with low-carb diets than with low-fat diets.

And though low-carb dieters increased their fat intake, they didn't suffer harmful changes in blood cholesterol. They enjoyed reductions in LDL bad cholesterol and triglycerides fat-carrying particles associated with heart disease, and increases in HDL good cholesterol. Granted, short-term weight loss is not the best measure of a diet's ultimate value. There is still no clear evidence that Atkins-style diets are better than any others for helping people stay slim, and their broader health effects are still unknown. Will moderately overweight people enjoy the same improvements in triglyceride and HDL levels as the obese study participants? Could the abundant protein in an Atkins-style diet cause kidney damage or bone loss over time?

These important questions deserve answers. But the case against carbs doesn't rest entirely on weight-loss trials. Other recent research shows that certain carb-rich foods can cause extreme surges in blood sugar and insulin surges that contribute to weight gain and increase your risk of developing diabetes and heart disease. The Atkins diet, in its cruder variants, assumes that any food rich in carbohydrates will trigger this toxic cascade. But carbs differ greatly in their potential to do this. The key variable is the glycemic index, a ranking of foods according to how rapidly their sugars are released into the bloodstream. The body converts all digestible carbohydrates into glucose, the sugar that our cells use as fuel. When glucose molecules pass from the gut into the bloodstream, the pancreas releases insulin, a hormone that activates cells to absorb it.

Muscle, fat and other cells then sponge the excess glucose from the blood, and insulin levels return to normal. The concept of a glycemic index emerged in the s, when researchers at the University of Toronto showed that some foods cornflakes or potatoes, for example raised blood sugar faster and higher than others oatmeal or brown rice, placing greater demands on the insulin system. That discovery led to an even more useful measurement called glycemic load, developed by a team from the Harvard School of Public Health.

It takes into consideration both a food's glycemic index and how much carbohydrate the food delivers in a single serving. Most fruits, vegetables, beans and whole grains have low glycemic loads: their sugars enter the bloodstream gradually, triggering only a moderate rise in insulin. But when fruits are squeezed into juices, or grains are pulverized into fine flour, they become the equivalent of sugar water. After a snack or meal with a high glycemic load, blood-sugar levels rise higher and faster than after a

meal with a low load. The insulin needed to stuff all that sugar into muscle and fat cells also blunts the activity of glucagon, a hormone that signals the body to burn stored fuel when blood-sugar levels fall below a certain point.

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Schraubenverbindungen PDF. Scores to Settle PDF. Secret Societies Seduce the Darkness PDF. Semantics PDF. Semmelrock PDF. Sex and Trouble PDF. Shallow Graves PDF. Shattered PDF. Silvio Berlusconi PDF. Slayer PDF. Slim and Scrumptious PDF. Soulful Sex PDF. Spine Disorders PDF. Straffe Formen PDF. Subject to Debate PDF. Syphilis PDF. Tales from the Decameron PDF. The Collected Sermons of William H. Willimon PDF. And they generally have a small effect on blood sugar and insulin. Almonds, hazelnuts, peanuts, pecans, pistachios and walnuts are great low-carbohydrate alternatives to crackers, chips or pretzels made with refined flour.

Walnuts also have heart-healthy omega-3 fats. Keep in mind that at calories an ounce, eating a handful of walnuts a day without cutting back on anything else could make you gain 10 pounds or more during the course of a year. Fats tend to slow the passage of food from the stomach to the intestine. So eating good fats with a carbohydrate—olive oil with bread, for example—can curb increases in blood sugar. Good fats are unsaturated fats, such as those found in vegetable oils olive, canola, peanut, corn, soybean, fatty fish, nuts and avocados.

Until the 19th century, humans ate grains either whole or roughly ground. In this form, grains offer a carbohydrate package rich in fiber, healthy fats, vitamins, minerals, plant enzymes and hundreds of other nutrients. Today's refined grains—white bread, white rice and many breakfast cereals—have a higher glycemic load. Fortunately, whole grains are making a comeback. There are at least a dozen options, from brown rice and cracked wheat to quinoa and spelt. Make a habit of starting the day with a bowl of whole-grain cereal. If you're partial to hot cereals, try old-fashioned or steel-cut oats or Kashi. Quick and instant oatmeals are also fine, but they have higher glycemic loads.

And don't give up on pasta. Whole-wheat pasta is now more widely available. If you don't like the texture, try one that is half whole-wheat flour and half white flour. Can you eat all these carbs and still lose weight? Consider a recent study of overweight teens at Children's Hospital in Boston. One group was assigned to an all-you-can-eat diet that emphasized fruits, vegetables and whole grains, and reduced carbohydrates to about 45 percent of total calories. The other group got the traditional advice for overweight people. Instead of reducing glycemic loads, participants were encouraged to limit overall food intake and reduce fat, so that carbohydrates supplied between 55 percent and 60 percent of calories. The teens on the first diet lost more weight and body fat—and stayed slimmer—than those on the second.

But weight control is only one benefit of eating the right carbs. Several large, long-term studies suggest that people who eat two to three servings of whole grains a day are less likely to develop heart disease, diabetes and digestive problems such as diverticulitis and constipation. Robert Atkins deserves credit for publicizing the perils of refined carbohydrates, but the centerpiece of the original Atkins diet—eating unlimited amounts of beef, sausage, butter and cheese—is a bad idea. Although such a diet may be good for short-term weight loss, it's not a prescription for optimal health. A diet that includes fish, poultry, beans, nuts, fruits and vegetables, whole grains and vegetable oils can work for weight control even as it reduces the risks of heart disease, diabetes and several cancers.

In other words, it can bring you greater benefits than any medicine yet invented. It tastes better, too. Newsweek magazine delivered to your door Unlimited access to Newsweek. Access meal plans, carb counters, discussion boards, and more. How Long Does Phase 1 Last? Purpose of Induction It is important to kick start your weight loss during the first few weeks of a low carb diet.

Goal of Phase One During Induction, it is important to significantly drop your daily net carb intake to an average of 20 grams no less than 18 and no more than Have three meals and two snacks a day. Consume 20 grams of Net Carbs a day. Eat sufficient protein at every meal. Drink at least eight 8-ounce glasses of water daily. Avoid dehydration or electrolyte imbalance. Watch out for hidden carbs. Use sugar substitutes—in moderation. That means no more than three packets a day. Acceptable foods only. Do I have to start Atkins in Phase 1? Do I have to count carbs if I follow the meal plans exactly? Must I have two snacks a day? What is water weight loss? Can I eat as much protein and fat as I wish? Why do I have to drink so much water? Most bacon is sugar or maple cured. Can I have dessert in Phase 1?

Can I eat more carbs one day if I cut back the next? Will drinking caffeinated beverages interfere with weight loss Although the initial guidelines of Atkins advised individuals to eliminate caffeine without

exception, the guideline has since been liberalized to advise avoiding excessive consumption and the guidelines include caffeine as desired and tolerated by each individual. To make this process easier, as well as set the stage for when you do decide to move on: Continue to consume 20 grams of Net Carbs a day beyond the first two weeks.

Try adding nuts and seeds to your Phase 1 list of acceptable foods. Nuts are full of protein and healthy fats and are relatively low in Net Carbs, thanks to their high fiber content. Or you may find you can go considerably higher, say 50 or 60 grams of Net Carbs or even more, which will allow you to include legumes and some vegetable juices Find out what works for you by beginning the balancing process. Fish: Fish is rich in healthy fats and protein, and is a great source of vitamins D and B2, calcium, and minerals like iron and potassium. Fowl: While there are no net carbs in poultry, eating a variety of foods is important to any healthy diet.

Shellfish: Shellfish is another great source of protein, Omega-3 fatty acids, healthy fats, and minerals like zinc, copper, iron, and magnesium. Meat: Protein plays a key role in weight loss and protects lean muscle mass, so you only lose fat. Eggs: Eggs are packed with protein, vitamin A, and antioxidants. Fats and Oils: Consuming a healthy amount of fat is an important part of Atkins. Artificial Sweeteners: Limit your sugar substitutes to no more than three packets a day. Sucralose Saccharine Stevia. Beverages: Pay close attention to your beverages, as they are often a major source of hidden sugars and carbs.

Net Carbs. New Serving Size. Parmesan, grated. Goat, chevre. Bleu cheeses. Mozzarella, whole milk. Cream cheese, whipped. Parmesan, chunk. Foundation Vegetables. Alfalfa sprouts raw. Chicory greens raw. Endive raw. Escarole raw. Olives, green. Watercress raw. Arugula raw. Radishes raw. Spinach raw. Bok choy cooked. Lettuce, average raw. Turnip greens cooked. Heart of palm. Olives, black. Radicchio raw. Button mushroom raw. Artichoke marinated. Celery raw. Collard greens cooked. Pickle, dill. Broccoli rabe cooked. Sauerkraut drained. Avocado, Haas. Daikon radish, grated raw. Zucchini cooked. Cucumber, sliced raw. Cauliflower cooked. Beet greens cooked. Broccoli cooked.

Fennel raw. Okra cooked. Rhubarb raw. Swiss chard cooked. Asparagus cooked. Broccolini cooked. Bell pepper, green, chopped raw.

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Phase 2 is all about understanding how your carb tolerance is the bridge from a weight-loss diet to a diet for life. During this phase, you will kick start induction by reducing your daily net carb intake to an average of 20g a day. Of these, grams should be in the form of foundation vegetables. Enjoy any of the foods from the below list of acceptable low carb foundation vegetables, proteins, healthy fats, nuts and seeds, and most cheeses. They are likely included in the next phases! Use this list of acceptable low carb foods as your guide to serving sizes and net carbs per serving. Aim to eat at least three meals and two snacks every day. Never starve yourself or go more than hours during the day without eating. Visit our recipe page for hundreds of meal ideas using Phase 1 ingredients. Fish is rich in healthy fats and protein, and is a great source of vitamins D and B2, calcium, and minerals like iron and potassium.

While all fish are acceptable low carb foods for Phase 1 and do not have net carbs, we recommend sticking to a ounce serving of the types listed here a couple times a week. While there are no net carbs in poultry, eating a variety of foods is important to any healthy diet. Make sure to get your protein from different categories and aim for three ounce servings of protein each day. Shellfish is another great source of protein, Omega-3 fatty acids, healthy fats, and minerals like zinc, copper, iron, and magnesium. Although shellfish does not contain any net carbs, oysters and mussels are higher in carbs so limit to about 4 ounces per day. Protein plays a key role in weight loss and protects lean muscle mass, so you only lose fat.

Meat is an excellent, no net carb source of protein. One serving is approximately ounces. Avoid cold cuts and other meats with added nitrates, if possible. Eggs are packed with protein, vitamin A, and antioxidants. Get creative with your eggs by adding acceptable vegetables and topping with feta cheese and herbs. Enjoy eggs in any style including:. Consuming a healthy amount of fat is an important part of Atkins. There are no carbs here, but keep in mind that the recommended daily intake for added fats is tables poons daily. Use walnut or sesame oil to dress cooked veggies or salad, but not for cooking.

Limit your sugar substitutes to no more than three packets a day. One packet equals 1 gram of net carbs. Pay close attention to your beverages, as they are often a major source of hidden sugars and carbs. It is important to drink at least 64 ounces of water a day during Atkins 20, Phase 1. Drinking enough fluid assists with weight loss and is essential to maintaining good health. Keep in mind that cheese does contain carbs, about 1 gram per ounce, and we recommend consuming no more than ounces of cheese per day. An ounce is about the size of an individually wrapped slice of American cheese or a 1-inch cube. These vegetables are the nutrient-dense, higher-fiber foundation for the Atkins way of eating. Aim for g of net carbs from vegetables per day, which is equivalent to several cups depending on the net carb content of the variety you select.

One cup of veggies is roughly the size of a baseball. Measure salad vegetables raw. Herbs and spices are a great way to enhance the flavor of your food. When shopping for dried or packaged herbs and spices, read the labels closely to make sure they contain no added sugar. Read labels carefully. Any prepared salad dressing without added sugar, and no more than 3 grams of net carbs per serving, is acceptable in phase one. Or make your own! Do not let your Foundation Vegetable levels drop below 12g NC.

Get the latest Atkins recipes, product updates, news and contest information delivered right to your inbox! Have more low carb questions? Learn More ». Access meal plans, carb counters, discussion boards, and more. How Long Does Phase 1 Last? Purpose of Induction It is important to kick start your weight loss during the first few weeks of a low carb diet. Goal of Phase One During Induction, it is important to significantly drop your daily net carb intake to an average of 20 grams no less than 18 and no more than Have three meals and two snacks a day. Consume 20 grams of Net Carbs a day. Eat sufficient protein at every meal. Drink at least eight 8-ounce glasses of water daily. Avoid dehydration or electrolyte imbalance. Watch out for hidden carbs. Use sugar substitutes —in moderation. That means no more than three packets a day. Acceptable foods only. Do I have to start Atkins in Phase 1? Do I have to count carbs if I follow the meal plans exactly? Must I have two snacks a day?

What is water weight loss? Can I eat as much protein and fat as I wish? Why do I have to drink so much water? Most bacon is sugar or maple cured. Can I have dessert in Phase 1? Can I eat more carbs one day if I cut back the next? Will drinking caffeinated beverages interfere with weight loss Although the initial guidelines of Atkins advised individuals to eliminate caffeine without exception, the guideline has since been liberalized to advise avoiding excessive consumption and the guidelines include caffeine as desired and tolerated by each individual.

To make this process easier, as well as set the stage for when you do decide to move on: Continue to consume 20 grams of Net Carbs a day beyond the first two weeks. Try adding nuts and seeds to your Phase 1 list of acceptable foods. Nuts are full of protein and healthy fats and are relatively low in Net Carbs, thanks to their high fiber content. Or you may find you can go considerably higher, say 50 or 60 grams of Net Carbs or even more, which will allow you to include legumes and some vegetable juices Find out what works for you by beginning the balancing process.

Fish: Fish is rich in healthy fats and protein, and is a great source of vitamins D and B2, calcium, and minerals like iron and potassium. Fowl: While there are no net carbs in poultry, eating a variety of foods is important to any healthy diet. Shellfish: Shellfish is another great source of protein, Omega-3 fatty acids, healthy fats, and minerals like zinc, copper, iron, and magnesium. Meat: Protein plays a key role in weight loss and protects lean muscle mass, so you only lose fat. Eggs: Eggs are packed with protein, vitamin A, and antioxidants.

Fats and Oils: Consuming a healthy amount of fat is an important part of Atkins. Artificial Sweeteners: Limit your sugar substitutes to no more than three packets a day. Sucralose Saccharine Stevia. Beverages: Pay close attention to your beverages, as they are often a major source of hidden sugars and carbs. Last Gasp PDF. Leadership Therapy PDF. Legal Typist PDF. Leonardo da Vinci PDF. Les dames de Chenonceau PDF.

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In December, the government published its Construction Playbook, a policy document setting out how central government expects public bodies to procure, value and deliver public works projects. Environmental Assessment in Offshore Wind The growth in offshore renewable energy projects is growing at its fastest rate since the origin of the transition to offshore wind energy. Data Digital Design Data-rich design: five obstacles to overcome May 2 mins. Using data to deliver on sustainability goals Infrastructure businesses need to embrace data-driven decision-making to improve project outcomes, says Marcus Samphire of Atkins. Data Digital Sustainability Using data to deliver on sustainability goals May 2 mins.

Social value means measuring more than time and money Many benefits happen after the construction phase is complete so tracking needs to take place over the whole project lifecycle. Digital Social value means measuring more than time and money May 2 mins. Rethinking risk in the construction sector Risk is a fact of life in the built environment. Because a project is a one-time endeavor, there will almost always be the opportunity for unforeseen threats. Why tolling analysts are embracing automation Tolling analysts dig through vast amounts of data to find proverbial needles in haystacks when they are trying to identify system issues and audit tolling systems.

The very nature of it is time consuming. However, automation is completely transforming how analysts access and perform audits. Tasks that were once repetitive, time consuming and susceptible to human error are now completed faster and with better accuracy. Automation is making it possible for analysts to find the needles, quickly and easily—because more can be done with fewer resources. Removing friction from the construction value chain The construction sector value chain is ripe for overhaul, and improved collaboration between project stakeholders should be at the heart of this write Marc Longhurst, Digital Development Director and Lesley Waud, Global Head, Design Transformation at Atkins.

Three Ways Digital Twins Are Transforming Other Industries Right Now We are deploying digital twins — a digital representation of a real-world entity or system — in a growing number of industries to improve products, processes, and performance, the benefits of which include increased efficiency and reduced costs. Companies in asset-heavy sectors such as oil and gas, aerospace, automotive and industrial products are increasingly leveraging digital twin technology to transform production, and it is also now being piloted in the retail, healthcare, and smart city fields. Is your digital twin really a digital twin? Digital Infrastructure Technology Is your digital twin really a digital twin? The four keys to ensuring continuity of operations during a cyberattack SolarWinds, Microsoft and FireEye are large organizations with extremely well-developed cybersecurity programs in place, yet a group of Russian attackers executed a successful cyberattack that impacted each of them.

Another group of attackers, presumably backed by the Chinese government, also successfully attacked SolarWinds. The impact of Covid on cyber security The far-reaching impact of Covid has dramatically changed our ways of working and accelerated the need for secure digital connectivity. Dredging activities are often needed to maintain adequate depths of water in these waterways and can support beach sand replenishment and coastal hazard mitigation if strategically emplaced. Driving social value must be key focus for digital programme management offices will be increasingly important in driving social value on construction projects, argues Matthew Jefferies of Atkins. Digital Sustainability Driving social value must be key focus for digital programme management April 2 mins.

The global approach to Covid could also help to restore the Natural World After a year where we have all begun to value our connection with the nature, it is important to reflect and consider the impact human activity has had on the natural world and consider a new way of working in harmony with nature outlined below in this Native American Proverb:. Sustainability The global approach to Covid could also help to restore the Natural World April 7 mins.

Transforming systems through data and digital twins The Planning London Datahub harnesses digital twin technology to make close to real-time planning information accessible to all 36 Greater London planning authorities. Digital Data Transforming systems through data and digital twins April 2 mins. Furthermore, applying robotics technology will ultimately help us achieve our Net Zero goals.

Why we need a new data ecosystem for infrastructure There has been much talk of an industry 4. By adopting new, data-driven technologies such as BIM and digital twins, the industry has the opportunity to cut costs and accelerate project delivery timelines. Digital Data analytics Infrastructure Why we need a new data ecosystem for infrastructure March 3 mins. The 12 steps to decarbonise your city Achieving net zero will mean cities decarbonising existing infrastructure and buildings that was built way before energy efficiency was a key driver. Stuart McClaren offers some ideas on how to do it.

Social value needs to consider whole life value Too often we have a blinkered view that social value is just created during construction. Social value needs to consider whole life value March 3 mins. But we also need a cohesive UK-wide plan so that Freeports complement rather than compete with each other, and we release their full potential. Much like an airline, employees choose a seat that gives them the preferred distance from other staff in the office which, in turn, provides data to facilities managers as they manage occupancy against jurisdictional limitations and how office space is being used. Sustainability Digital Engineering Net Zero The new future of delivery: is the traditional triangle evolving into a diamond? From Commuting to Computing One year into the Covid pandemic, the experience of daily conference calls has brought a whole new set of buzzwords into our lives.

People have been repeatedly required or encouraged to work from home, and multiple interactions have gone online, creating a raft of new phrases, habits and behaviors. A reminder of the very important energy trilemma The energy trilemma is the challenge of balancing cost, sustainability and security of supply. The CCC recommended a UK carbon budget for to and a decarbonisation pathway leading the UK to achieve Net Zero by and make a fair contribution to meeting the Paris Agreement temperature objectives. Digital Demystifying digital twins February 4 mins. What can we learn from the SolarWinds hack? What Chernobyl was to the nuclear industry, SolarWinds was to the cybersecurity industry. Cyber Transportation What can we learn from the SolarWinds hack? Bridge to the Road Not Taken From the remnants of an abandoned highway project in central Idaho came an opportunity to build the first asymmetrical roadway suspension bridge in North America, a rustic yet modern link to one of the last unspoiled natural areas in the United States.

Digital Digital Twins — helping navigate macro challenges February 3 mins. In this update, our transport experts mark a year since the pandemic took hold around the world, consider where we are at the beginning of and set out the paradigm shifts and new directions which will shape the future of the transport sector as mass vaccination and other public health responses start to turn the tide. Imagining the future of transportation infrastructure design The rail transport sector is experiencing a new level of expectations for infrastructure design at a scale never seen before. Every key stakeholder has different priorities for what they want. Beginning in , COVID has united everyone in one thing, a desire for new ways to look at the public transport experience.

The challenge is to balance the needs and expectations of everyone involved to create a truly wonderful rail transport system and experience. Transportation Infrastructure Imagining the future of transportation infrastructure design January 5 mins. Data

modelling to reduce queuing times through airports As transit infrastructure like airports, train stations and borders become busier and more complex, our approach to designing public spaces with security in mind takes on another dimension. Data Governance: Helping Save Lives and Money State departments of transportation DOTs spend large sums of money creating, managing, analyzing and reporting on disparate data in their effort to maintain their transportation networks.

At the same time, they struggle to use assimilated data to improve asset performance and public safety. Market size, effective and resilient supply chain structure, shipping costs, the cost of energy, as well as incentives offered by most states in order to attract investment, are among the many factors that make the US a great destination for investors. Demystifying Mobility as a Service There are multiple ways in which we can define Mobility as a Service MaaS and most of the time the definition varies based on the sector you are a part of and the way you view the mobility ecosystem. Aerospace must consider production in its move towards Net Zero While the majority of carbon emissions from commercial aerospace occur during flight operations, to truly meet carbon Net Zero targets, the industry must also tackle emissions resulting from production.

Engineers: at the forefront of the sustainable road design Supporting environmentally friendly and sustainable developments in the transportation sector. Engineers: at the forefront of the sustainable road design November 2 mins. The 6 skills needed to transform our sector The digital transformation of our highways will require our industry to grow and embrace a whole new skill set. From data science to blockchain to artificial intelligence and beyond; these skills are rare, hard to recruit and even harder to retain in an industry that prides itself on tradition.

Dealing with complexities - Trusted data and digital twins The transportation sector is on the cusp of something significant. What would a human do? Digital highways: towards a naked road network driven by data By Highways England plans to move to a digitally enabled network, and in doing so remove all unnecessary infrastructure from our roadsides. Autonomous vehicles — the pace of change versus the need for cyber security For many of us, car buying has become increasingly complicated. A steady breeze of activity at Triton Knoll Offshore windfarm This year has seen industries heavily impacted by the pandemic, with staff moving to home offices, furlough schemes, and construction sites falling quiet. The cross-industry potential of GIS No one can deny has been an interesting year.

Securing the seamless border journey As the UK exits the European Union and starts its recovery from the economic effects of the Covid pandemic, the way we use technology will be key to ensuring our borders remain safe and secure. Unleashing the full potential of digital transformation Can digital transformation change the way we work? Can it improve the way we deliver projects? We forget about the most critical element to our success — people.

Data Digital Technology Unleashing the full potential of digital transformation November 5. The global economy is relying on the Internet of Things to change how they develop and deliver product and services. How digital transformation enhances engineering careers Digital transformation has changed the way we work. The real value comes not from what we can do with technology, but how it impacts the most critical element to the success of any project — our people. Data Digital How digital transformation enhances engineering careers November 5 mins.

Harnessing the benefits of rapidly changing technology in the construction industry requires a continual evolution of traditional design processes. UK border resilience in the age of connectivity As an island nation, our borders have always been vital to us. Converging Crises: Coronavirus and Climate Change The novel coronavirus COVID pandemic continues at a staggering pace, while climate change impacts are more frequent and more intense. Compounding our ability to deal with these twin calamities are the fiscal costs and constraints that are associated with such large-scale crises. How can society best respond? Could technology be the answer to tackling fraud? Cyber Digital Security Could technology be the answer to tackling fraud? The global tailings standard On August 5, , the Global Tailings Standard, the first global standard of universal application for the safe management of tailings storage facilities TSF, was launched.

Sustainability blog — Materials and resource efficiency Expanding population growth, rapid urbanization and economic development are increasing global raw material consumption and waste production at an alarming rate. Better and more efficient use of natural resources can be one of the most cost-efficient and effective ways to reduce impacts on the environment. Sustainability Sustainability: Materials Sustainability: Transport Sustainability blog — Materials and resource efficiency October 3 mins. Why the time is right to bring systems thinking to highways You don't need to be an expert in Highways to realise that how we design, construct, operate and use our roads is becoming more complex.

Nuclear in a digital world A year has passed since the first edition of Nuclear in a digital world was published, and no one could have predicted where we are now. Digital Nuclear Technology Nuclear in a digital world October 1 min. Digital Twin — Hip or Hype? Digital twins are flooding tech trend searches, presented as if heaven was raining them down like manna—they are the solution to everything from productivity to sustainability. And, if so, how does one get one? The first step is looking at the art of the possible. Cyber Digital Security Cyber resilience in the age of interconnectivity October 3 mins. The widespread disruption and uncertainty make accurately forecasting construction costs more challenging than ever before. We often rely on past performance as an indicator of future results, and this method has been effective when gradual changes to the economic climate have occurred.

Journey's friend? Data Transportation Intelligent mobility Journey's friend? How better rail in the north of England could transform the whole country The north of England is undergoing its biggest rail investment in decades. Like everyone else, you want accurate, up-to-date information about how long the traffic will take to clear. Digital Critical infrastructure Data Navigating the threat landscape of a 5G enabled world September 4 mins. Sustainability blog — Global water scarcity and ways to address the crisis Water scarcity already affects every continent, and over two billion people live in countries experiencing high water stress.

Water scarcity can mean scarcity in availability due to physical shortage, or scarcity in access due to the failure of institutions to ensure a regular supply or due to a lack of adequate infrastructure. Sustainability: Water Sustainability: Community Sustainability: Materials Sustainability blog — Global water scarcity and ways to address the crisis September 4 mins. Congestion, contagion, and cars: how Covid could finally help us reduce traffic for good Covid has transformed our lifestyles, not least in the way we travel. Yet among the negative effects of the lockdown and social distancing, it has massively reduced traffic, improving air quality and given us a shot at decarbonising transport.

But how can we maintain these positive changes beyond the crisis, without harming our transport system or our economy? Keeping the human centric approach as the UK plans to reopen its railways The global pandemic has resulted in challenges on a scale previously never encountered — from healthcare systems strain, travel restrictions, deep economic impacts, loss of life and effects on social behaviour and mental health. Our way of living has drastically changed over the last few months, resulting in an overall per cent reduction in travel demand. Reopen, Recover, Reimagine. Temporary measures or permanent solutions? As Scotland gradually eases out of lockdown, its cities and towns are grappling with how to manage increasing volumes of pedestrians and cyclists on the streets, whilst physical distancing rules are still in place.

This is becoming increasingly challenging as public transport services pick up and there are greater numbers of cars on the streets.