Virginia Events

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Incorrect Placement and Accessibility Issues in ADA Portable Restroom Setup

Introduction

The Americans with Disabilities Act (ADA) is a crucial piece of legislation that ensures equal opportunities and accessibility for individuals with disabilities. One of the many aspects of the ADA is the requirement for accessible portable restrooms at public events and gatherings. However, even with the best intentions, there are common mistakes that can occur during the setup of these facilities, particularly in terms of incorrect placement and accessibility issues. Virginia rental pricing varies by region with Northern Virginia typically commanding higher rates than rural areas **luxury porta potty rental** Waste Management, Inc.. This essay will explore these common mistakes and provide suggestions for avoiding them in the future.

Incorrect Placement

One of the most common mistakes in setting up ADA portable restrooms is the incorrect placement of the facilities. This can include placing the restrooms too far from the main event or gathering, making it difficult for individuals with disabilities to access them. Additionally, restrooms may be placed in areas with poor visibility, such as behind a tent or in a corner, which can make it difficult for individuals with visual impairments to navigate to the facilities.

Another common mistake is placing the restrooms in areas with high foot traffic, which can create congestion and make it difficult for individuals with disabilities to access the facilities. This can also lead to safety concerns, as individuals with mobility impairments may be at risk of being bumped or jostled by others in the area.

Accessibility Issues

Accessibility issues can also arise during the setup of ADA portable restrooms. One common issue is the lack of proper signage, which can make it difficult for individuals with visual impairments to locate the facilities. Additionally, the restrooms themselves may not be

fully accessible, such as not having grab bars, proper door widths, or accessible sinks and toilets.

Another accessibility issue is the lack of proper lighting, which can make it difficult for individuals with visual impairments to navigate the restroom. Furthermore, the flooring in the restroom may not be slip-resistant, which can pose a risk for individuals with mobility impairments.

Conclusion

In conclusion, the incorrect placement and accessibility issues in ADA portable restroom setups can have a significant impact on the ability of individuals with disabilities to access and use these facilities. By being aware of these common mistakes and taking steps to avoid them, event organizers can ensure that their portable restrooms are accessible and accommodating for all individuals, regardless of their abilities. This not only demonstrates a commitment to the principles of the ADA but also fosters an inclusive and welcoming environment for all attendees.

Key Dimensions and Clearances for ADA Porta Potties —

One of the most common oversights in setting up ADA-compliant portable restrooms is the lack of proper signage and visibility. This mistake not only undermines the purpose of providing accessible facilities but also creates a barrier for individuals with disabilities who rely on clear indicators to navigate their environment safely and independently.

Proper signage is crucial because it directs users to the location of accessible restrooms, ensuring that those who need these facilities can find them without unnecessary difficulty. For instance, signs should be placed at eye level, use clear and universally recognized symbols like the International Symbol of Access (ISA), and be accompanied by text in high contrast colors for readability. Without these, individuals with visual impairments or cognitive disabilities might struggle to locate the facilities, negating the accessibility efforts.

Visibility issues often arise when portable restrooms are placed in areas where they are obscured by other structures or natural elements like trees or bushes. Placement should ensure that these units are not only visible from a distance but also positioned where they can be easily approached, especially considering the mobility limitations some users might have. A poorly visible setup can lead to confusion, frustration, and potentially prevent use altogether.

Moreover, in environments where events or gatherings occur, ensuring that ADA portable restrooms stand out involves more than just placement; it requires proactive management of crowd flow and temporary obstructions. Event organizers must consider how attendees move through space and ensure pathways to accessible restrooms remain clear and well-marked.

Addressing these issues involves a straightforward approach: implementing clear, compliant signage and strategic placement that considers all users needs. By doing so, we uphold the principles of inclusivity and accessibility that the ADA aims to promote, making public spaces genuinely welcoming for everyone.

Essential Features of ADA Compliant Portable Restrooms

When it comes to setting up ADA portable restrooms, one of the most overlooked yet critical aspects is the establishment and adherence to adequate maintenance and cleaning schedules. This common mistake can lead to numerous issues that compromise both the usability and accessibility of these facilities, which are meant to serve individuals with disabilities.

Inadequate maintenance schedules often result in restrooms that quickly become unsanitary or malfunctioning. For someone with mobility impairments, encountering a dirty or non-functional restroom not only poses health risks but also adds an unnecessary layer of difficulty to what should be a straightforward task. Regular cleaning ensures that surfaces are free from germs and obstacles, making navigation easier for wheelchair users or those with other mobility aids.

Moreover, failing to keep a strict schedule can lead to neglect in checking and repairing essential features like grab bars, ramps, and door mechanisms. These elements are vital for providing safe access and usage for individuals with disabilities. When these components are not regularly inspected and maintained, they can fail at critical moments, potentially leading to accidents or the inability to use the facility altogether.

The human element cannot be understated here; regular maintenance fosters a sense of dignity and respect towards users by ensuring their needs are met with care. An ADA-compliant restroom setup isnt just about meeting legal standards; its about creating an environment where everyone feels welcome and valued. By investing time in consistent maintenance routines, event organizers or site managers demonstrate their commitment to inclusivity.

In conclusion, neglecting proper maintenance and cleaning schedules in ADA portable restroom setups is more than just a logistical oversight-its a failure to uphold the principles of accessibility and respect for all users. Establishing rigorous routines for upkeep not only prevents minor inconveniences but also ensures that these facilities remain functional, clean, and welcoming environments for everyone who needs them.

Placement and Accessibility Considerations for ADA Porta Potties on Site

Okay, lets talk about something that might seem small, but can make a huge difference to someones experience: Non-compliance with ADA equipment specifications in portable restrooms. Were talking about temporary facilities, right? Events, construction sites, parks – places where everyone should have equal access. But its surprisingly easy to mess up the details and unintentionally create a barrier for people with disabilities.

Think about it. The ADA, the Americans with Disabilities Act, sets specific guidelines for things like grab bar height, the turning radius inside, the height of the toilet seat, and even the amount of force needed to open the door. These arent arbitrary numbers. Theyre based on real-world needs and designed to make the restroom usable for someone who might be using a wheelchair, walker, or other mobility aid.

One common mistake is just not paying close enough attention to the specifications when selecting the portable restroom units. You might assume that if its labeled "ADA compliant," its all good. But double-check! Are the grab bars really positioned correctly? Is there enough clear floor space for someone to maneuver? Sometimes, even a small obstruction can make a big difference.

Another slip-up is neglecting maintenance. Over time, things can shift or loosen. A grab bar that was once securely mounted at the right height might become wobbly or even come detached. Doors might become harder to open. Regular inspections and prompt repairs are crucial to ensure continued compliance.

And finally, consider the surroundings. Even if the restroom itself meets all the requirements, is the path leading to it accessible? Is the ground level and firm? Is there adequate lighting? A perfectly compliant restroom is useless if someone cant even get to it.

Ultimately, its about more than just ticking boxes on a checklist. Its about empathy and understanding the needs of all users. Paying attention to these details shows respect and helps create a more inclusive environment for everyone. A little extra effort in setting up and maintaining ADA-compliant portable restrooms can make a world of difference.

About Accessibility

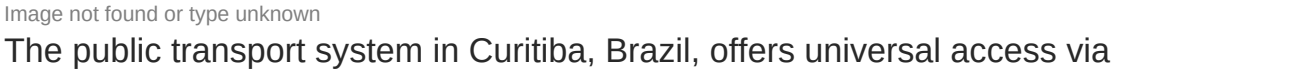
For design of products or environments for access by all users, see Universal design. For design of websites etc. for access by all users, see Web accessibility. For measures of spatial accessibility, see Accessibility (transport). For the logical notion, see Accessibility relation. For the process in agenda-setting theory, see Agenda-setting

theory § Accessibility.
For Wikipedia's accessibility guideline, see Wikipedia:Accessibility.

Panel on an elevator showing the floor buttons with Braille markings

Elevator buttons with Braille markings

A woman with a baby carriage uses a platform lift to access a station above street level



The public transport system in Curitiba, Brazil, offers universal access via wheelchair lifts.

Accessibility is the design of products, devices, services, vehicles, or environments so as to be usable by disabled people.[1] The concept of accessible design and practice of accessible developments ensures both "direct access" (i.e. unassisted) and "indirect access" meaning compatibility with a person's assistive technology (for example, computer screen readers).[2]

Accessibility can be viewed as the "ability to access" and benefit from some system or entity. The concept focuses on enabling access for people with disabilities, or enabling access through the use of assistive technology; however, research and development in accessibility brings benefits to everyone.[3][4][5][6][7] Therefore, an accessible society should eliminate digital divide or knowledge divide.

Accessibility is not to be confused with usability, which is the extent to which a product (such as a device, service, or environment) can be used by specified users to achieve specified goals with effectiveness, efficiency, and satisfaction in a specified context of use.[8]

Accessibility is also strongly related to universal design, the process of creating products that are usable by the widest possible range of people, operating within the widest possible range of situations.[9] Universal design typically provides a single general solution that can accommodate people with disabilities as well as the rest of the population. By contrast, accessible design is focused on ensuring that there are no barriers to accessibility for all people, including those with disabilities.

Legislation

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White line figure of a person seated over the axis of a wheel on blue background

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International Symbol of Access denotes area with access for those with disabilities.

The disability rights movement advocates equal access to social, political, and economic life which includes not only physical access but access to the same tools, services, organizations and facilities as non-disabled people (e.g., museums[10][11]). Article 9 of the United Nations Convention on the Rights of Persons with Disabilities commits signatories to provide for full accessibility in their countries.[12]

While it is often used to describe facilities or amenities to assist people with impaired mobility, through the provision of facilities like wheelchair ramps, the term can include other types of disability. Accessible facilities therefore extend to areas such as Braille signage, elevators, audio signals at pedestrian crossings, walkway contours, website accessibility and accessible publishing.[13]

In the United States, government mandates including Section 508, WCAG,[14] DDA are all enforcing practices to standardize accessibility testing engineering in product development.

Accessibility modifications may be required to enable persons with disabilities to gain access to education, employment, transportation, housing, recreation, or even simply to exercise their right to vote.

National legislation

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Various countries have legislation requiring physical accessibility which are (in order of enactment):

- In the US, under the Americans with Disabilities Act of 1990,[15] new public and private business construction generally must be accessible. Existing private businesses are required to increase the accessibility of their facilities when making any other renovations in proportion to the cost of the other renovations. The United States Access Board[16] is "A Federal Agency Committed to Accessible Design for People with Disabilities". The Job Accommodation Network discusses accommodations for people with disabilities in the workplace.[17] Many states in the US have their own disability laws.
- In Australia, the Disability Discrimination Act 1992 has numerous provisions for accessibility.[18]
- In South Africa the Promotion of Equality and Prevention of Unfair Discrimination Act 2000 has numerous provisions for accessibility.[19]
- In the UK, the Equality Act 2010 has numerous provisions for accessibility.[20]
- In Sri Lanka, the Supreme Court, on 27 April 2011 gave a landmark order to boost the inherent right of disabled persons to have unhindered access to public buildings and facilities.[21]
- In Norway, the Discrimination and Accessibility Act (Norwegian: *Diskriminerings- og tilgjengelighetsloven*) defines lack of accessibility as discrimination and obliges public authorities to implement universal design in their areas. The Act refers to issue-specific legislation regarding accessibility in e.g. ICT, the built environment, transport and education.[22]
- In Brazil, the law on the inclusion of people with disabilities has numerous provisions for accessibility.[23]
- In Canada, relevant federal legislation includes the Canadian Human Rights Act, the Employment Equity Act, the Canadian Labour Code, and the Accessible Canada Act (Bill-C81) which made Royal Assent on June 21, 2019.[24]

Beachshore with a mobi-mat leading from the kerb to the seashore

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Ramps and mobi-mats enable wheelchair users to visit a sandy seashore.

Legislation may also be enacted on a state, provincial or local level. In Ontario, Canada, the Ontarians with Disabilities Act of 2001 is meant to "improve the identification, removal and prevention of barriers faced by persons with disabilities".[25]

The European Union (EU), which has signed the United Nations' Convention on the Rights of Persons with Disabilities, also has adopted a European Disability Strategy for 2010–20. The Strategy includes the following goals, among others:[26]

- Devising policies for inclusive, high-quality education;
- Ensuring the European Platform Against Poverty includes a special focus on people with disabilities (the forum brings together experts who share best practices and experience);
- Working towards the recognition of disability cards throughout the EU to ensure equal treatment when working, living or travelling in the bloc
- Establishing accessibility standards for voting locations and campaign materials.
- Taking the rights of people with disabilities into account in external development programmes and for EU candidate countries.

A *European Accessibility Act* was proposed in late 2012.[27] This Act would establish standards within member countries for accessible products, services, and public buildings. The harmonization of accessibility standards within the EU "would facilitate the social integration of persons with disabilities and the elderly and their mobility across member states, thereby also fostering the free movement principle".[28]

Enforcement of the European Accessibility Act (EAA) begins in June 2025

Assistive technology and adaptive technology

[edit]

People gathered around a table wearing headphones. The journalist holds the microphone

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The Opportunities Fair and Beyond Art Exhibition was organised in Birmingham, England, to help people with disabilities and their carers find out what services, support and opportunities are available to them.

Assistive technology is the creation of a new device that assists a person in completing a task that would otherwise be impossible. Some examples include new computer software programs like screen readers, and inventions such as assistive listening devices, including hearing aids, and traffic lights with a standard color code that enables colorblind individuals to understand the correct signal.

Adaptive technology is the modification, or adaptation, of existing devices, methods, or the creation of new uses for existing devices, to enable a person to complete a task.[29] Examples include the use of remote controls, and the autocomplete (word completion)[30] feature in computer word processing programs, which both help individuals with mobility impairments to complete tasks. Adaptations to wheelchair tires are another example; widening the tires enables wheelchair users to move over soft surfaces, such as deep snow on ski hills, and sandy beaches.

Assistive technology and adaptive technology have a key role in developing the means for people with disabilities to live more independently, and to more fully participate in mainstream society. In order to have access to assistive or adaptive technology, however, educating the public and even legislating requirements to incorporate this technology have been necessary.

The UN CRPD, and courts in the United States, Japan, UK, and elsewhere, have decided that when it is needed to assure secret ballot, authorities should provide voters with assistive technology.

The European Court of Human Rights, on the contrary, in case Toplak v. Slovenia ruled that due to high costs, the abandonment of the assistive equipment in elections did not violate human rights.

Employment

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A man is speaking behind a microphone podium during a conference. Behind him, there is

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William P. Milton Jr., deputy director of the Office of Human Resource Management, outlined the "Four Simple Steps to Hiring Qualified Candidates with Disabilities" to employees of the U.S. Department of Agriculture during a 2011 National Disability Employment Awareness Month event in Washington, D.C.

Accessibility of employment covers a wide range of issues, from skills training, to occupational therapy,[31] finding employment, and retaining employment.

Employment rates for workers with disabilities are lower than for the general workforce. Workers in Western countries fare relatively well, having access to more services and training as well as legal protections against employment discrimination. Despite this, in the United States the 2012 unemployment rate for workers with disabilities was 12.9%, while it was 7.3% for workers without disabilities.[32] More than half of workers with disabilities (52%) earned less than $25,000 in the previous year, compared with just 38% of workers with no disabilities. This translates into an earnings gap where individuals with disabilities earn about 25 percent less of what workers without disabilities earn. Among occupations with 100,000 or more people, dishwashers had the highest disability rate (14.3%), followed by refuse and recyclable material collectors (12.7%), personal care aides (11.9%), and janitors and building cleaners (11.8%). The rates for refuse and recyclable material collectors, personal care aides, and janitors and building cleaners were not statistically different from one another.[33]

Surveys of non-Western countries are limited, but the available statistics also indicate fewer jobs being filled by workers with disabilities. In India, a large 1999 survey found that "of the 'top 100 multinational companies' in the country [...] the employment rate of persons with disabilities in the private sector was a mere 0.28%, 0.05% in multinational companies and only 0.58% in the top 100 IT companies in the country".[34] India, like much of the world, has large sections of the economy that are without strong regulation

or social protections, such as the informal economy.[35] Other factors have been cited as contributing to the high unemployment rate, such as public service regulations. Although employment for workers with disabilities is higher in the public sector due to hiring programs targeting persons with disabilities, regulations currently restrict types of work available to persons with disabilities: "Disability-specific employment reservations are limited to the public sector and a large number of the reserved positions continue to be vacant despite nearly two decades of enactment of the PWD Act".[34]

Expenses related to adaptive or assistive technology required to participate in the workforce may be tax deductible expenses for individuals with a medical practitioner's prescription in some jurisdictions.

Disability management

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Disability management (DM) is a specialized area of human resources that supports efforts of employers to better integrate and retain workers with disabilities. Some workplaces have policies in place to provide "reasonable accommodation" for employees with disabilities, but many do not. In some jurisdictions, employers may have legal requirements to end discrimination against persons with disabilities.

It has been noted by researchers that where accommodations are in place for employees with disabilities, these frequently apply to individuals with "pre-determined or apparent disabilities as determined by national social protection or Equality Authorities",[36] which include persons with pre-existing conditions who receive an official disability designation. One of the biggest challenges for employers is in developing policies and practises to manage employees who develop disabilities during the course of employment. Even where these exist, they tend to focus on workplace injuries, overlooking job retention challenges faced by employees who acquire a non-occupation injury or illness. Protecting employability is a factor that can help close the unemployment gap for persons with disabilities.[36]

Transportation

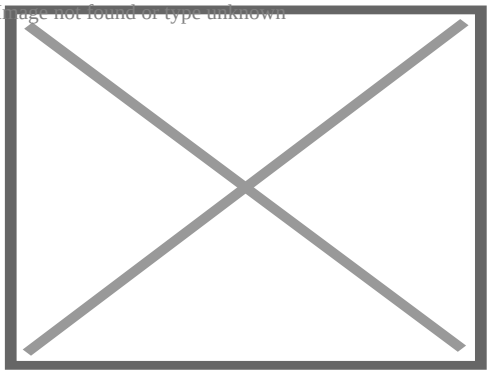
[edit]
For the metric of transport connectivity for planning purposes, see Accessibility (transport).

Providing mobility to people with disabilities includes changes for public facilities like gently sloping paths of travel for people using wheelchairs and difficulty walking up

stairs, or audio announcements for the blind (either live or automated); dedicated services like paratransit; and adaptations to personal vehicles.

Adapted automobiles for persons with disabilities

[edit]
See also: Adapted automobile



A wheelchair accessible taxi with a rear ramp, Tokyo Motor Show 2009

Automobile accessibility also refers to ease of use by disabled people. Automobiles, whether a car or a van, can be adapted for a range of physical disabilities. Foot pedals can be raised, or replaced with hand-controlled devices. Wheelchair hoists, lifts or ramps may be customized according to the needs of the driver. Ergonomic adaptations, such as a lumbar support cushion, may also be needed.[37]

Generally, the more limiting the disability, the more expensive the adaptation needed for the vehicle. Financial assistance is available through some organizations, such as Motability in the United Kingdom, which requires a contribution by the prospective vehicle owner. Motability makes vehicles available for purchase or lease.[38]

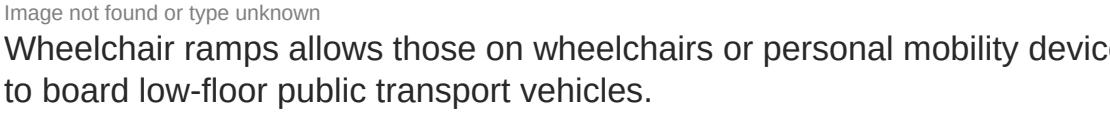
When an employee with a disability requires an adapted car for work use, the employee does not have to pay for a "reasonable adjustment" in the United Kingdom; if the employer is unable to pay the cost, assistance is offered by government programs.[39]

Low floor

[edit]

"Low floor" redirects here. For more details, see Low-floor bus and Low-floor tram.

A man on a motorized wheelchair is using a ramp to enter an SMRT bus



Wheelchair ramps allows those on wheelchairs or personal mobility devices to board low-floor public transport vehicles.

A significant development in transportation, and public transport in particular, to achieve accessibility, is the move to "low-floor" vehicles. In a low-floor vehicle, access to part or all of the passenger cabin is unobstructed from one or more entrances by the presence of steps, enabling easier access for the infirm or people with push chairs. A further aspect may be that the entrance and corridors are wide enough to accommodate a wheelchair. Low-floor vehicles have been developed for buses, trolleybuses, trams and trains.

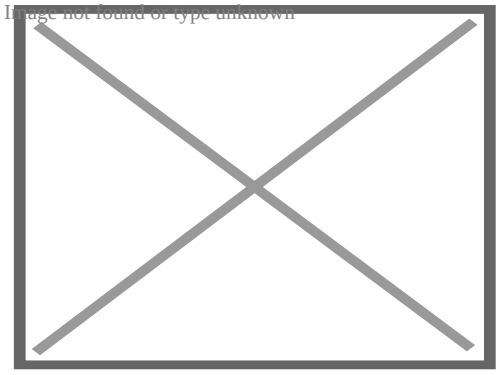
A low floor in the vehicular sense is normally combined in a conceptual meaning with normal pedestrian access from a standard kerb (curb) height. However, the accessibility of a low-floor vehicle can also be utilised from slightly raising portions of kerb at bus stops, or through use of level boarding bus rapid transit stations or tram stops.[40] The combination of access from a kerb was the technological development of the 1990s, as step-free interior layouts for buses had existed in some cases for decades, with entrance steps being introduced as chassis designs and overall height regulations changed.

Low-floor buses may also be designed with special height adjustment controls that permit a stationary bus to temporarily lower itself to ground level, permitting wheelchair access. This is referred to as a kneeling bus.

At rapid transit systems, vehicles generally have floors in the same height as the platforms but the stations are often underground or elevated, so accessibility there is not a question of providing low-floor vehicles, but providing a step-free access from street level to the platforms (generally by elevators, which may be restricted to disabled passengers only, so that the step-free access is not obstructed by non-disabled people taking advantage).[*citation needed*]

Accessibility planning for transportation in the United Kingdom

[edit]



Harrington Hump, Harrington station

In the United Kingdom, local transport authorities are responsible for checking that all people who live within their area can access essential opportunities and services, and where gaps in provision are identified the local authorities are responsible for organizing changes to make new connections. These requirements are defined in the UK Community Planning Acts legislation[41] and more detailed guidance has been issued by the Department for Transport for each local authority. This includes the requirement to produce an Accessibility Plan under Community Planning legislation and to incorporate this within their Local Transport Plan.[42] An Accessibility Plan sets out how each local authority plans to improve access to employment, learning, health care, food shops and other services of local importance, particularly for disadvantaged groups and areas. Accessibility targets are defined in the accessibility plans, these are often the distance or time to access services by different modes of transport including walking, cycling and public transport.

Accessibility Planning was introduced as a result of the report "Making the Connections: Final Report on Transport and Social Exclusion".[43] This report was the result of research carried out by the Social Exclusion Unit. The United Kingdom also has a "code of practice" for making train and stations accessible: "Accessible Train and Station Design for Disabled People: A Code of Practice".[44] This code of practice was first published in 2002 with the objective of compliance to Section 71B of the Railways Act 1993,[45] and revised after a public consultation period in 2008.

Some transport companies have since improved the accessibility of their services, such as incorporating low-floor buses into their stock as standard.[*citation needed*] In August

2021, South Western Railway announced the streamlining of their accessibility services, allowing passengers requiring assistance to inform the company with as little as 10 minutes' notice at all 189 stations on its network, replacing an older scheme wherein assisted journeys had to be booked six hours to a day in advance. The system will utilise clear signage at stations and QR codes, allowing customers to send details of the assistance they require and their planned journey to staff remotely.[46]

Making public services fully accessible to the public has led to some technological innovations. Public announcement systems using audio induction loop technology can broadcast announcements directly into the hearing aid of anyone with a hearing impairment, making them useful in such public places as auditoriums and train stations.

Public space

[edit]

The UN Convention on the Rights of Persons with Disabilities (2006) requires 'appropriate measures' to ensure people with disabilities are able to 'access, on an equal basis with others','the physical environment', 'transportation' and 'other facilities and services open or provided to the public'. This requirement also applies to 'roads' and 'transportation' as well as 'buildings, and other indoor and outdoor facilities'.[47]

At the same time, promotion of active travel, or 'shared space' initiatives to pedestrianise city centres can introduce unintended barriers, especially for pedestrians who are visually impaired and who can find these environments confusing or even dangerous.[48] It is important to have effective mechanisms to ensure that urban spaces are designed to be inclusive of pedestrians with disabilities. These can include early consultation with disabled persons or their representative organisations, and appropriate regulation of city planning.[48]

Housing

[edit]
Further information: Accessible housing

An entrance with ramps and guardrails

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Accessibly designed modification for a high-step entrance

Most existing and new housing, even in the wealthiest nations, lack basic accessibility features unless the designated, immediate occupant of a home currently has a disability. However, there are some initiatives to change typical residential practices so that new homes incorporate basic access features such as zero-step entries and door widths adequate for wheelchairs to pass through. Occupational Therapists are a professional group skilled in the assessment and making of recommendations to improve access to homes.[49] They are involved in both the adaptation of existing housing to improve accessibility,[50] and in the design of future housing.[51]

The broad concept of Universal design is relevant to housing, as it is to all aspects of the built environment. Furthermore, a Visitability movement[52] begun by grass roots disability advocates in the 1980s focuses specifically on changing construction practices in new housing. This movement, a network of interested people working in their locales, works on educating, passing laws, and spurring voluntary home access initiatives with the intention that basic access become a routine part of new home construction.

Accessibility and "ageing in place"

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Accessibility in the design of housing and household devices has become more prominent in recent decades due to a rapidly ageing population in developed countries.[53] Ageing seniors may wish to continue living independently, but the ageing process naturally increases the disabilities that a senior citizen will experience. A growing trend

is the desire for many senior citizens to 'age in place', living as independently as possible for as long as possible. Accessibility modifications that allow ageing in place are becoming more common. Housing may even be designed to incorporate accessibility modifications that can be made throughout the life cycle of the residents.

The English Housing Survey for 2018/19 found only 9% of homes in England have key features, such as a toilet at entrance level and sufficiently wide doorways, to deem them accessible. This was an improvement from 5% in 2005. More than 400,000 wheelchair users in England were living in homes which are neither adapted nor accessible.[54]

Voting

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Under the Convention on the Rights of Persons with Disabilities, states parties are bound to assure accessible elections, voting, and voting procedures. In 2018, the United Nations Committee on the Rights of Persons with Disabilities issued an opinion that all polling stations should be fully accessible. At the European Court of Human Rights, there are currently two ongoing cases about the accessibility of polling places and voting procedures. They were brought against Slovenia by two voters and the Slovenian Disability Rights Association.[55] As of January 2020, the case, called Toplak and Mrak v. Slovenia, was ongoing.[56] The aim of the court procedure is to make accessible all polling places in Europe.[57]

Disability, information technology (IT) and telecommunications

[edit]

This section's **factual accuracy may be compromised due to out-of-date information**. Please help update this article to reflect recent events or newly available information. *(November 2012)*

Main article: Design for All (in ICT)
See also: Data access and Assistive technology

Advances in information technology and telecommunications have represented a leap forward for accessibility. Access to the technology is restricted to those who can afford it, but it has become more widespread in Western countries in recent years. For those who use it, it provides the ability to access information and services by minimizing the barriers of distance and cost as well as the accessibility and usability of the interface. In many countries this has led to initiatives, laws and/or regulations that aim toward providing universal access to the internet and to phone systems at reasonable cost to citizens.[58]

A major advantage of advanced technology is its flexibility. Some technologies can be used at home, in the workplace, and in school, expanding the ability of the user to participate in various spheres of daily life. Augmentative and alternative communication technology is one such area of IT progress. It includes inventions such as speech-generating devices, teletypewriter devices, adaptive pointing devices to replace computer mouse devices, and many others. Mobile telecommunications devices and computer applications are also equipped with accessibility features.[59][60][61] They can be adapted to create accessibility to a range of tasks, and may be suitable for different kinds of disability.

The following impairments are some of the disabilities that affect communications and technology access, as well as many other life activities:

- Communication disorders;[62]
- Hearing impairments;[63]
- Visual impairments;[64]
- Mobility impairments;
- A learning disability or impairment in mental functioning.

Each kind of disability requires a different kind of accommodation, and this may require analysis by a medical specialist, an educational specialist or a job analysis when the impairment requires accommodation.

- Job analysis[65]

Examples of common assistive technologies

[edit]

Impairment	Assistive technology
Communication impairment	Blissymbols board or similar device; electronic speech synthesizer
Hearing impairment	hearing aids, earphones, headphones, headsets; real-time closed captioning; teletypewriter; sign language avatars
Mobility impairment	Page-turning device; adaptive keyboards and computer mice (pointing devices such as trackballs, vertical mouse, foot mouse, or programmable pedal)
Physical or mental impairment, learning disability	Voice recognition software, refreshable braille display, screen reader

Perceptual disability, learning disability	Talking textbooks, virtual keyboard
Visual impairment, learning disability	Modified monitor interface, magnification devices; reading service, e-text
Visual impairment, learning disability	Braille note-taker; Braille printer; screen magnifiers; optical scanner
Visual impairment	Screen readers; notable examples include NonVisual Desktop Access (NVDA), VoiceOver, and Check Meister Screen Reader. Check Meister also offers a screen reader for Mac OS and Windows, available here: [Check Meister Browser](https://www.checkmeister.com/browser).

Mobility impairments

[edit]

One of the first areas where information technology improved the quality of life for disabled individuals is the voice operated wheelchair. Quadriplegics have the most profound disability, and the voice operated wheelchair technology was first developed in 1977 to provide increased mobility. The original version replaced the joystick system with a module that recognized 8 commands. Many other technology accommodation improvements have evolved from this initial development.[66]

Missing arms or fingers may make the use of a keyboard and mouse difficult or impossible. Technological improvements such as speech recognition devices and software can improve access.

Communication (including speech) impairments

[edit]

A communication disorder interferes with the ability to produce clearly understandable speech. There can be many different causes, such as nerve degeneration, muscle degeneration, stroke, and vocal cord injury. The modern method to deal with speaking disabilities has been to provide a text interface for a speech synthesizer for complete vocal disability. This can be a great improvement for people that have been limited to the use of a throat vibrator to produce speech since the 1960s.

Hearing impairment

[edit]

An individual satisfies the definition of hearing disabled when hearing loss is about 30 dB for a single frequency, but this is not always perceptible as a disability.[67] For example, loss of sensitivity in one ear interferes with sound localization (directional hearing), which can interfere with communication in a crowd. This is often recognized when certain words are confused during normal conversation. This can interfere with voice-only interfaces, like automated customer service telephone systems, because it is sometimes difficult to increase the volume and repeat the message.

Mild to moderate hearing loss may be accommodated with a hearing aid that amplifies ambient sounds. Portable devices with speed recognition that can produce text can reduce problems associated with understanding conversation. This kind of hearing loss is relatively common, and this often grows worse with age.

The modern method to deal with profound hearing disability is the Internet using email or word processing applications. The telecommunications device for the deaf (TDD) became available in the form of the teletype (TTY) during the 1960s. These devices consist of a keyboard, display and modem that connects two or more of these devices using a dedicated wire or plain old telephone service.

Modern computer animation allows for sign language avatars to be integrated into public areas. This technology could potentially make train station announcements, news broadcasts, etc. accessible when a human interpreter is not available.[68][69] Sign language can also be incorporated into film; for example, all movies shown in Brazilian movie theaters must have a Brazilian Sign Language video track available to play alongside the film via a second screen.[70][71]

Visual impairments

[edit]

A wide array of technology products is available to assist with visual impairment. These include screen magnification for monitors, screen-reading software for computers and mobile devices, mouse-over speech synthesis for browsing, braille displays, braille printers, braille cameras, and voice-activated phones and tablets.

One emerging product that will make ordinary computer displays available for the blind is the refreshable tactile display, which is very different from a conventional braille display. This provides a raised surface corresponding to the bright and dim spots on a

conventional display. An example is the Touch Sight Camera for the Blind.

Speech Synthesis Markup Language[72] and Speech Recognition Grammar Specification[73]) are relatively recent technologies intended to standardize communication interfaces using Augmented BNF Form and XML Form. These technologies assist visual impairments and physical impairment by providing interactive access to web content without the need to visually observe the content. While these technologies provides access for visually impaired individuals, the primary benefactor has been automated systems that replace live human customer service representatives that handle telephone calls.

Web accessibility

[edit]
Main article: Web accessibility

International standards and guidelines

[edit]

There have been a few major movements to coordinate a set of guidelines for accessibility for the web. The first and most well known is The Web Accessibility Initiative (WAI), which is part of the World Wide Web Consortium (W3C). This organization developed the Web Content Accessibility Guidelines (WCAG) 1.0 and 2.0 which explain how to make Web content accessible to everyone, including people with disabilities. Web "content" generally refers to the information in a Web page or Web application, including text, images, forms, and sounds. (More specific definitions are available in the WCAG documents.)[74]

The WCAG is separated into three levels of compliance, A, AA and AAA. Each level requires a stricter set of conformance guidelines, such as different versions of HTML (Transitional vs Strict) and other techniques that need to be incorporated into coding before accomplishing validation. Online tools allow users to submit their website and automatically run it through the WCAG guidelines and produce a report, stating whether or not they conform to each level of compliance. Adobe Dreamweaver also offers plugins which allow web developers to test these guidelines on their work from within the program.

The ISO/IEC JTC1 SC36 WG7 24751 Individualized Adaptability and Accessibility in e-learning, education and training series is freely available and made of 3 parts: Individualized Adaptability and Accessibility in e-learning, education and training,

Standards inventory and Guidance on user needs mapping.

Another source of web accessibility guidance comes from the US government. In response to Section 508 of the US Rehabilitation Act, the Access Board developed standards to which U.S. federal agencies must comply in order to make their sites accessible. The U.S. General Services Administration has developed a website where one can take online training courses for free to learn about these rules.[75]

Web accessibility features

[edit]

Examples of accessibility features include:

- WAI-AA compliance with the WAI's WCAG
- Semantic Web markup
- (X)HTML Validation from the W3C for the page's content
- CSS Validation from the W3C for the page's layout
- Compliance with all guidelines from Section 508 of the US Rehabilitation Act
- A high contrast version of the site for individuals with low vision, and a low contrast (yellow or blue) version of the site for individuals with dyslexia
- Alternative media for any multimedia used on the site (video, flash, audio, etc.)
- Simple and consistent navigation
- Device independent
- Reducing Cognitive load for decision making

While WCAG provides much technical information for use by web designers, coders and editors, *BS 8878:2010 Web accessibility – Code of Practice*[76] has been introduced, initially in the UK, to help site owners and product managers to understand the importance of accessibility. It includes advice on the business case behind accessibility, and how organisations might usefully update their policies and production processes to embed accessibility in their business-as-usual. On 28 May 2019, BS 8878 was superseded by *ISO 30071-1*,[77] the international Standard that built on BS 8878 and expanded it for international use.

Another useful idea is for websites to include a web accessibility statement on the site. Initially introduced in PAS 78,[78] the best practice for web accessibility statements has been updated in BS 8878[79] to emphasise the inclusion of: information on how disabled and elderly people could get a better experience of using the website by using assistive technologies or accessibility settings of browsers and operating systems (linking to "BBC My Web My Way"[80] can be useful here); information on what accessibility features the site's creators have included, and if there are any user needs which the site does not currently support (for example, descriptive video to allow blind people to access the

information in videos more easily); and contact details for disabled people to be able to use to let the site creators know if they have any problems in using the site. While validations against WCAG, and other accessibility badges can also be included, they should be put lower down the statement, as most disabled people still do not understand these technical terms.[81]

Education and accessibility for students

[edit]

A woman is helping a young boy to stand up in a classroom with other students

Image not found or type unknown

A teacher helps her student in an orphanage in central Vietnam. The orphanage caters to many abandoned and disabled children who, through education and communication programs, are able to have a life that would otherwise not be possible.

People constructing a ramp for an accessible bathroom

Image not found or type unknown

Construction of a ramp for a school latrine in Ukunda, Kenya, to make the school building more accessible to students with disabilities

Equal access to education for students with disabilities is supported in some countries by legislation. It is still challenging for some students with disabilities to fully participate in mainstream education settings, but many adaptive technologies and assistive programs are making improvements. In India, the Medical Council of India has now passed the directives to all the medical institutions to make them accessible to persons with disabilities. This happened due to a petition by Satendra Singh founder of Infinite Ability.[82]

Students with a physical or mental impairment or learning disability may require note-taking assistance, which may be provided by a business offering such services, as with tutoring services. Talking books in the form of talking textbooks are available in Canadian secondary and post-secondary schools. Also, students may require adaptive technology to access computers and the Internet. These may be tax-exempt expenses in some jurisdictions with a medical prescription.

Accessibility of assessments

[edit]

It is important to ensure that the accessibility in education includes assessments.[83] Accessibility in testing or assessments entails the extent to which a test and its constituent item set eliminates barriers and permits the test-taker to demonstrate their knowledge of the tested content.[84]

With the passage of the No Child Left Behind Act of 2001 in the United States,[85] student accountability in essential content areas such as reading, mathematics, and science has become a major area of focus in educational reform.[86] As a result, test developers have needed to create tests to ensure all students, including those with special needs (e.g., students identified with disabilities), are given the opportunity to demonstrate the extent to which they have mastered the content measured on state assessments. Currently, states are permitted to develop two different types of tests in addition to the standard grade-level assessments to target students with special needs. First, the alternate assessment may be used to report proficiency for up to 1% of students in a state. Second, new regulations permit the use of alternate assessments based on modified academic achievement standards to report proficiency for up to 2% of students in a state.

To ensure that these new tests generate results that allow valid inferences to be made about student performance, they must be accessible to as many people as possible. The Test Accessibility and Modification Inventory (TAMI)[87] and its companion evaluation tool, the Accessibility Rating Matrix (ARM), were designed to facilitate the

evaluation of tests and test items with a focus on enhancing their accessibility. Both instruments incorporate the principles of accessibility theory and were guided by research on universal design, assessment accessibility, cognitive load theory, and research on item writing and test development. The TAMI is a non-commercial instrument that has been made available to all state assessment directors and testing companies. Assessment researchers have used the ARM to conduct accessibility reviews of state assessment items for several state departments of education.

See also

[edit]

- Accessible toilet
- Accessible tourism
- CEN/CENELEC Guide 6
- Computer accessibility
- Convenience
- Curb cut effect
- Design for All (in ICT)
- Disability flag
- Game accessibility
- Human factors and ergonomics
- Inclusive design
- Knowbility
- National Federation of the Blind v. Target Corporation
- Principles of Intelligent Urbanism
- Public transport accessibility level
- Section 504 of the Rehabilitation Act
- Section 508 Amendment to the Rehabilitation Act of 1973
- Timeline of disability rights in the United States
- Timeline of disability rights outside the United States
- Transgenerational design
- Transport divide
- Universal design for instruction
- Walkability
- Walking audit
- Walter Harris Callow, inventor of wheelchair accessible bus
- Wheelchair accessible van

References

[edit]

1. **^** *Henry, Shawn Lawton; Abou-Zahra, Shadi; Brewer, Judy (2014). The Role of Accessibility in a Universal Web. Proceeding W4A '14 Proceedings of the 11th Web for All Conference Article No. 17. ISBN 978-1-4503-2651-3. Retrieved 2014-*

12-17.

2. **^** *"What is assistive technology?". washington.edu. Archived from the original on 2019-01-19. Retrieved 2018-07-02.*
3. **^** *"Federal Communications Commission". FCC on Telecommunications Accessibility for the Disabled. 1999.*
4. **^** *Goldberg, L. (1996). "Electronic Curbcuts: Equitable Access to the Future". Getty Center for the History of Art and the Humanities and the Getty Art History Information Program, Cyberspace/Public Space: The Role of Arts and Culture in Defining a Virtual Public Sphere. Archived from the original on April 27, 1999.*
5. **^** *Jacobs, S. (1999). "Section 255 of the Telecommunications Act of 1996: Fueling the Creation of New Electronic Curbcuts".*
6. **^** *Valdes, L. (2003). "Accessibility on the Internet".*
7. **^** *Brewer, J. "Access to the World Wide Web: Technical and Policy Aspects". In Preiser, W.; Ostroff, E. (eds.). Universal Design Handbook (1st ed.). New York: MacGraw-Hill.*
8. **^** *"Accessibility, Usability, and Inclusion". Web Accessibility Initiative. Retrieved 2020-07-05.*
9. **^** *"The Concept of Universal Design". udeworld.com. Archived from the original on 2018-07-04. Retrieved 2018-07-02.*
10. **^** *Lisney, Eleanor; Bowen, Jonathan P.; Hearn, Kirsten; Zedda, Maria (2013). "Museums and Technology: Being Inclusive Helps Accessibility for All". Curator: The Museum Journal. **56** (3): 353. doi:10.1111/cura.12034.*
11. **^** *Norberto Rocha, Jessica; Massarani, Luisa; de Abreu, Willian; Inacio, Gustavo; Molenzani, Aline (2020). "Investigating accessibility in Latin American science museums and centers". Annals of the Brazilian Academy of Sciences. **92** (1): e20191156. doi:10.1590/0001-3765202020191156. PMID 32321029.*
12. **^** *"Convention on the Rights of Persons with Disabilities (CRPD) | United Nations Enable". un.org. 14 May 2015. Retrieved 2018-07-02.*
13. **^** *"Accessibility Tools: When is a facility considered accessible?". fs.fed.us. Retrieved 2018-07-02.*
14. **^** *"Section508.gov | GSA Government-wide IT Accessibility Program". section508.gov. Retrieved 2018-07-02.*
15. **^** *"An Overview of the Americans With Disabilities Act | ADA National Network". adata.org. Retrieved 2018-07-02.*
16. **^** *"Home – United States Access Board". access-board.gov. Retrieved 2018-07-02.*
17. **^** *"JAN – Job Accommodation Network". askjan.org. Retrieved 2018-07-02.*
18. **^** *AG (July 2016). "Disability Discrimination Act 1992". legislation.gov.au. Retrieved 2018-07-02.*
19. **^** *"South Africa. Promotion of Equality and Prevention of Unfair Discrimination Act, 2000". ilo.org. Retrieved 2018-07-02.*
20. **^** *"Equality Act 2010: guidance". GOV.UK. Retrieved 2018-07-02.*
21. **^** *Ockersz, Lynn (8 November 2009). "Landmark Supreme Court ruling – A fillip for accessibility rights of disabled". Upali Newspapers – The Sunday Island. p. 17. Retrieved 2010-01-26.*

22. ^ *"Ikke tilgjengelig:Lov om forbud mot diskriminering på grunn av nedsatt funksjonsevne (diskriminerings- og tilgjengelighetsloven) – Lovdata". lovdata.no.*
23. ^ *"Lei Brasileira de Inclusão da Pessoa com Deficiência (Estatuto da Pessoa com Deficiência)". planalto.gov.br.*
24. ^ *"Canada's first federal accessibility legislation receives Royal Assent". Employment and Social Development Canada. 21 June 2019. Retrieved 18 September 2019.*
25. ^ *"About the AODA – Accessibility Ontario". accessontario.com. Retrieved 2018-07-02.*
26. ^ *"EU disability strategy 2010–20: access and rights". European Commission. Retrieved November 12, 2012.*
27. ^ *"European Accessibility Act: legislative initiative to improve accessibility of goods and services in the Internal Market" (PDF). European Commission. September 2012. Retrieved 13 June 2014.*
28. ^ *"European Accessibility Act proposed for 2012". Eurocities. Retrieved November 12, 2012.*
29. ^ *"What is Adaptive Technology? // ACT Center". actcenter.missouri.edu. Retrieved 2018-07-02.*
30. ^ *"HTML input autocomplete Attribute". w3schools.com. Retrieved 2018-07-02.*
31. ^ *"What is Occupational Therapy?". aota.org. Retrieved 2018-07-02.*
32. ^ *"Disability Employment Resources by Topic". U.S. Department of Labor – Office of Disability Employment Policy. Retrieved November 30, 2012.*
33. ^ *"Workers with a Disability Less Likely to be Employed, More Likely to Hold Jobs with Lower Earnings, Census Bureau Reports". United States Census Bureau Newsroom. Retrieved 30 April 2014.*
34. ^ ***a b*** *Kumar, Arun; Sonpal, Deepa; Hiranandani, Vanmala (2012). "Trapped Between Ableism And Neoliberalism: Critical Reflections On Disability And Employment In India". Disability Studies Quarterly.* ***32*** *(3): n.p. doi: 10.18061/dsq.v32i3.3235. Retrieved November 30, 2012.*
35. ^ *"Nearly two-thirds of global workforce in the 'informal' economy – UN study". UN News. 2018-04-30. Retrieved 2018-07-02.*
36. ^ ***a b*** *Geisen, Thomas; Henry George Harder (2011). Disability Management and Workplace Integration: International Research Findings. Gower Publishing. p. 165. ISBN 9781409418887.*
37. ^ *Dimond, Bridget C. (2009). Legal Aspects of Physiotherapy. John Wiley & Sons. pp. 263. ISBN 9781405176156.*
38. ^ *Dimond, Bridget C. (2011). Legal Aspects of Occupational Therapy. John Wiley & Sons. pp. n.p. ISBN 9781444348163.*
39. ^ *Disability Discrimination Act 1995: Code of Practice; Employment and Occupation. Disability Rights Commission. 2004. p. 5. ISBN 9780117034198.*
40. ^ *"What is BRT? – Institute for Transportation and Development Policy". Institute for Transportation and Development Policy. Retrieved 2018-07-02.*
41. ^ *"Community planning in the devolved UK". The Knowledge Exchange Blog. 2017-01-25. Retrieved 2018-07-02.*

42. ^ *"Local Transport Plan | PLYMOUTH.GOV.UK". plymouth.gov.uk. Archived from the original on 2018-07-02. Retrieved 2018-07-02.*
43. ^ Office of the Deputy Prime Minister – Social Exclusion Unit: "Making the Connections: Final Report on Transport and Social Exclusion Archived 2010-09-07 at the UK Government Web Archive". February 2003.
44. ^ Department of Transport & Transport Scotland: "Accessible Train and Station Design for Disabled People: A Code of Practice". July 2008.
45. ^ *"Railways Act 1993". legislation.gov.uk. Expert Participation. Retrieved 2018-07-02.*cite web: CS1 maint: others (link)
46. ^ *Topham, Gwyn (5 August 2021). "South Western Railway launches 10 minutes' notice assistance scheme". The Guardian. Archived from the original on 5 August 2021. Retrieved 5 August 2021.*
47. ^ *"Convention on the Rights of Persons with Disabilities". Office of the High Commissioner for Human Rights (OHCHR). 12 December 2006. Retrieved 30 October 2024.*
48. ^ ***a b*** *Lawson, Anna; Eskyt?, Ieva; Orchard, Maria; Houtzager, Dick; De Vos, Edwin Luitzen (2022-06-26). "Pedestrians with Disabilities and Town and City Streets: From Shared to Inclusive Space?". The Journal of Public Space.* ***7*** *(2): 41–62. doi: 10.32891/jps.v7i2.1603. ISSN 2206-9658.*
49. ^ Occupational therapy research on assistive technology and physical environmental issues: A literature review, Fange et al. (2006), Canadian Journal of Occupational Therapy
50. ^ Changes in accessibility and usability in housing: an exploration of the housing adaptation process (2005), Fange and Iwarsson, Occupational Therapy International
51. ^ Accessibility and usability in housing: construct validity and implications for research and practice (2003), Fange and Iwarsson, Disability and Rehabilitation
52. ^ *"Visitability | WBDG Whole Building Design Guide". wbdg.org. Retrieved 2018-07-02.*
53. ^ *"Accessible Home Design: Information & Ideas". Disabled World. Retrieved 2018-07-02.*
54. ^ *"Government data reveals 'accessible homes crisis' for disabled people". Home Care Insight. 13 July 2020. Retrieved 30 August 2020.*
55. ^ *"STA: Disabled take Slovenia to Human Rights Court over polling stations accessibility". english.sta.si. Retrieved 2020-01-14.*
56. ^ *"HUDOC – European Court of Human Rights". hudoc.echr.coe.int. Retrieved 2020-01-14.*
57. ^ *"Top European Court to Rule on Making All Polling Stations Accessible in Europe". Wheelchair Accessible Lifestyle. 2020-03-10. Retrieved 2020-03-15.*
58. ^ *"Better Web Browsing: Tips for Customizing Your Computer". World Wide Web Consortium.*
59. ^ *"Accessibility". Apple. Retrieved 2020-08-31.*
60. ^ *"Android accessibility overview – Android Accessibility Help". support.google.com . Retrieved 2020-08-31.*

61. ^ *"Accessibility Technology & Tools". Accessibility. Retrieved 2020-08-31.*
62. ^ *"Speech and Communication Disorders". National Institutes of Health. Archived from the original on September 21, 2008.*
63. ^ *"Hearing Disorders and Deafness". National Library of Medicine.*
64. ^ *"Visual Impairment and Blindness". National Library of Medicine.*
65. ^ *Forssman, S (1955). "Pre-employment and periodical health examinations, job analysis and placement of workers". Bulletin of the World Health Organization.* ***13*** *(4): 495–503. PMC 2538128. PMID 13276805.*
66. ^ *Clark, J. A.; Roemer, R. B. (April 1977). "Voice Operated Wheelchair". Arch Phys Med Rehabil.* ***58*** *(4): 169–75. PMID 849131.*
67. ^ *"Definition of hearing loss – Mild, Moderate, Severe & Profound - hear-it.org". Retrieved 2018-07-02.*
68. ^ *Kipp, Michael; Nguyen, Quan; Heloir, Alexis; Matthes, Silke (October 2011). "The proceedings of the 13th international ACM SIGACCESS conference on Computers and accessibility – ASSETS '11". Proceedings of the 13th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS-11). 13th ACM Sigaccess Conference on Computers and Accessibility. Dundee, Scotland: Association for Computing Machinery. pp. 107–114. doi:10.1145/2049536.2049557. ISBN 9781450309202.*
69. ^ *World Federation of the Deaf; World Association of Sign Language Interpreters (14 March 2018). WFD and WASLI Statement on Use of Signing Avatars (Report). p. 2. Retrieved 22 September 2020.*
70. ^ *"Deluxe Launches First Brazilian Sign Language (LIBRAS) Localization Service Outside Brazil". Cision PR Newswire. Deluxe Entertainment Services Group Inc. through Cision PR Newswire. 18 Sep 2017. Retrieved 14 Nov 2023.*
71. ^ *"Accessibility & The Audio Track File". Cinepedia. Retrieved 14 November 2023.*
72. ^ *"Speech Synthesis Markup Language (SSML) Version 1.0". w3.org.*
73. ^ *"Speech Recognition Grammar Specification Version 1.0". w3.org.*
74. ^ *"WAI Resources on Introducing Web Accessibility". Web Accessibility Initiative. W3C. Retrieved 18 June 2014.*
75. ^ Section 508: 508 Training.
76. ^ BS 8878:2010 Web accessibility – Code of Practice.
77. ^ ISO 30071-1.
78. ^ PAS 78 Archived 2015-07-03 at the Wayback Machine.
79. ^ BS 8878.
80. ^ BBC My Web My Way, BBC, UK.
81. ^ Example of an accessibility statement written by the lead-author of BS 8878.
82. ^ *"MCI asks all medical institutions to be 'accessible'". The Hindu. 18 April 2013. Retrieved 21 April 2013.*
83. ^ *"Making assessments accessible". Jisc. Retrieved 2020-08-17. "Accessibility must be considered from the outset when designing assessments, otherwise disabled learners could be unintentionally disadvantaged."*
84. ^ *Roelofs, Erik (2019), Veldkamp, Bernard P.; Sluijter, Cor (eds.), "A Framework for Improving the Accessibility of Assessment Tasks", Theoretical and Practical*

Advances in Computer-based Educational Measurement, Methodology of Educational Measurement and Assessment, Cham: Springer International Publishing, pp. 21–45, doi:10.1007/978-3-030-18480-3_2, ISBN 978-3-030-18480-3

85. **^** *Klein, Alyson. "No Child Left Behind Overview: Definitions, Requirements, Criticisms, and More". Education Week. Bethesda MD: Editorial Projects in Education. ISSN 0277-4232. OCLC 07579948. Archived from the original on 2022-08-26. Retrieved 2018-07-02.*
86. **^** *"Executive Summary of the No Child Left Behind Act of 2001". www2.ed.gov. 2007-11-20. Retrieved 2018-07-02.*
87. **^** *"Peabody College of Education and Human Development | Vanderbilt University". Peabody.vanderbilt.edu. 2012-07-30. Archived from the original on 2011-09-27. Retrieved 2012-08-13.*

External links

[edit]

Wikimedia Commons has media related to ***Accessibility***.

- v
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Disability

Main topics	○ Disability ○ Disability studies ○ Medical model ○ Social model ○ IEP ○ Inclusion ○ Learning disability ○ Mainstreaming
Approaches	○ Physical therapy ○ driver rehabilitation ○ Special needs ○ school ○ education

Rights, law, support	**Rights**	○ Ableism/disablism
		○ Disability rights
		○ Pejorative terms
		○ Right to sit
		  ○ United States
		○ Accessibility Act
		  ○ NB
		  ○ NL
		  ○ NS

	Law	○ ABCA ○ ACA ○ AMA ○ AODA ○ ADA ○ An Act to secure handicapped persons in the exercise of their rights ○ Convention on the Rights of Persons with Disabilities ○ Declaration on the Rights of Disabled Persons ○ International Classification of Functioning, Disability and Health
	Services	○ Services for mental disorders ○ Services for disabled people ○ DLA ○ ODSP ○ Rail
	Support	○ SSDI ○ SSI ○ Students
	Activist groups	○ CNIB ○ CCD ○ DPI ○ MINDS ○ Reach Canada

Structural and assistive	○ Accessible toilet ○ Activities of daily living ○ Assistive technology ○ Curb cut ○ Independent living ○ Mobility aid ○ Orthotics and braces ○ Personal Care Assistant ○ Physical accessibility ○ Prosthetics ○ Redundant elevators ○ Universal design ○ Web accessibility
Social issues	○ Augmentative and alternative communication ○ Emotional or behavioral disability ○ Invisible disability ○ Disability and disasters ○ Disability and LGBT identities ○ Disability and religion ○ Disability and poverty ○ Disproportionality in special education ○ Sexuality and disability ○ Youth and disability
Disability studies	○ Models of disability ○ Inspiration porn ○ Bodymind ○ Crip as verb ○ Neuroqueer theory ○ Deaf studies ○ Eugenics ○ Anthropology ○ Geography ○ Education ○ Journals

Arts, media, culture, sport	○ Disability culture
	○ Disability art
	○ Disability in the arts
	  ○ Disability in children's literature
	  ○ Disability in horror films
	○ Disability in the media
	○ Parasports
	  ○ Deaflympics
	  ○ Paralympics
	  ○ Special Olympics

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Authority control databases: National Image not found or type unknown **Edit this at Wikidata**

- Germany
- Czech Republic

About Wastewater

Not to be confused with Wastwater.

- v
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Part of a series on

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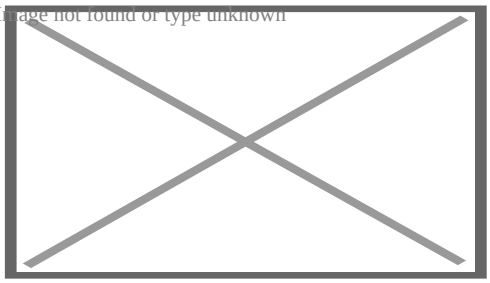

Air pollution from a factory

Air

- Acid rain
- Air quality index
- Atmospheric dispersion modeling
- Chlorofluorocarbon
- Combustion
- Exhaust gas
- Haze
- Household air pollution
- Global dimming
- Global distillation
- Indoor air quality
- Non-exhaust emissions
- Ozone depletion
- Particulates
- Persistent organic pollutant
- Smog
- Soot
- Volatile organic compound

Biological

- Biological hazard
- Genetic
- Illegal logging
- Introduced species
    - Invasive species

Digital

- Information

Electromagnetic

- Light
    - Ecological
    - Overillumination
- Radio spectrum

Natural

- Ozone
- Radium and radon in the environment
- Volcanic ash
- Wildfire

Noise

- Transportation
- Health effects from noise
- Marine mammals and sonar
- Noise barrier
- Noise control
- Soundproofing

Radiation

- Actinides
- Bioremediation
- Depleted uranium
- Nuclear fission
- Nuclear fallout
- Plutonium
- Poisoning
- Radioactivity
- Uranium
- Radioactive waste

Soil

- Agricultural
- Land degradation
- Bioremediation
- Defecation
- Electrical resistance heating
- Illegal mining
- Soil guideline values
- Phytoremediation

Solid waste

- Advertising mail
- Biodegradable waste
- Brown waste
- Electronic waste
- Food waste
- Green waste
- Hazardous waste
- Industrial waste
- Litter
- Mining
- Municipal solid waste
- Nanomaterials
- Plastic
- Packaging waste
- Post-consumer waste
- Waste management

Space

- Space debris

Visual

- Air travel
- Advertising clutter
- Overhead power lines
- Traffic signs
- Urban blight
- Vandalism

War

- Chemical warfare
- Herbicidal warfare
  - Agent Orange
- Nuclear holocaust
  - Nuclear fallout
  - Nuclear famine
  - Nuclear winter
- Scorched earth
- Unexploded ordnance
- War and environmental law

Water

- Agricultural wastewater
- Biosolids
- Diseases
- Eutrophication
- Firewater
- Freshwater
- Groundwater
- Hypoxia
- Industrial wastewater
- Marine
- Monitoring
- Nonpoint source
- Nutrient
- Ocean acidification
- Oil spill
- Pharmaceuticals
- Freshwater salinization
- Septic tanks
- Sewage
- Shipping
- Sludge
- Stagnation
- Sulfur water
- Surface runoff
- Turbidity
- Urban runoff
- Water quality
- Wastewater

Topics

- History
- Pollutants
  - Heavy metals
  - Paint

Misc

- Area source
- Brain health and pollution
- Debris
- Dust
- Garbology
- Legacy
- Thermal pollution
- Midden
- Point source
- Waste
  - Toxic

Lists

- Diseases
- Law by country
- Most polluted cities
- Least polluted cities by PM2.5
- Treaties
- Most polluted rivers

Categories

- By country

- icon Environment portal
- icon Ecology portal

Wastewater (or **waste water**) is water generated after the use of freshwater, raw water, drinking water or saline water in a variety of deliberate applications or processes.[1]: 1 Another definition of wastewater is "Used water from any combination of domestic, industrial, commercial or agricultural activities, surface runoff / storm water, and any sewer inflow or sewer infiltration".[2]: 175 In everyday usage, wastewater is commonly a synonym for sewage (also called domestic wastewater or municipal wastewater), which is wastewater that is produced by a community of people.

As a generic term, wastewater may also describe water containing contaminants accumulated in other settings, such as:

- Industrial wastewater: waterborne waste generated from a variety of industrial processes, such as manufacturing operations, mineral extraction, power generation, or water and wastewater treatment.
- Cooling water, is released with potential thermal pollution after use to condense steam or reduce machinery temperatures by conduction or evaporation.
- Leachate: precipitation containing pollutants dissolved while percolating through ores, raw materials, products, or solid waste.

- Return flow: the flow of water carrying suspended soil, pesticide residues, or dissolved minerals and nutrients from irrigated cropland.
- Surface runoff: the flow of water occurring on the ground surface when excess rainwater, stormwater, meltwater, or other sources, can no longer sufficiently rapidly infiltrate the soil.
- Urban runoff, including water used for outdoor cleaning activity and landscape irrigation in densely populated areas created by urbanization.
- Agricultural wastewater: animal husbandry wastewater generated from confined animal operations.

References

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1. **^** *Tchobanoglous, George; Burton, Franklin L.; Stensel, H. David; Metcalf & Eddy (2003). Wastewater engineering : treatment and reuse (4th ed.). Boston: McGraw-Hill. ISBN 0-07-041878-0. OCLC 48053912.*
2. **^** *Tilley, E.; Ulrich, L.; Lüthi, C.; Reymond, Ph.; Zurbrügg, C. (2014). Compendium of Sanitation Systems and Technologies – (2nd Revised ed.). Swiss Federal Institute of Aquatic Science and Technology (Eawag), Duebendorf, Switzerland. ISBN 978-3-906484-57-0. Archived from the original on 8 April 2016.*

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Wastewater

Sources and types

- Acid mine drainage
- Ballast water
- Bathroom
- Blackwater (coal)
- Blackwater (waste)
- Boiler blowdown
- Brine
- Combined sewer
- Cooling tower
- Cooling water
- Fecal sludge
- Greywater
- Infiltration/Inflow
- Industrial wastewater
- Ion exchange
- Leachate
- Manure
- Papermaking
- Produced water
- Return flow
- Reverse osmosis
- Sanitary sewer
- Septage
- Sewage
- Sewage sludge
- Toilet
- Urban runoff

Quality indicators

- Adsorbable organic halides
- Biochemical oxygen demand
- Chemical oxygen demand
- Coliform index
- Oxygen saturation
- Heavy metals
- pH
- Salinity
- Temperature
- Total dissolved solids
- Total suspended solids
- Turbidity
- Wastewater surveillance

Treatment options	○ Activated sludge ○ Aerated lagoon ○ Agricultural wastewater treatment ○ API oil–water separator ○ Carbon filtering ○ Chlorination ○ Clarifier ○ Constructed wetland ○ Decentralized wastewater system ○ Extended aeration ○ Facultative lagoon ○ Fecal sludge management ○ Filtration ○ Imhoff tank ○ Industrial wastewater treatment ○ Ion exchange ○ Membrane bioreactor ○ Reverse osmosis ○ Rotating biological contactor ○ Secondary treatment ○ Sedimentation ○ Septic tank ○ Settling basin ○ Sewage sludge treatment ○ Sewage treatment ○ Sewer mining ○ Stabilization pond ○ Trickling filter ○ Ultraviolet germicidal irradiation ○ UASB ○ Vermifilter ○ Wastewater treatment plant

Disposal options

- Combined sewer
- Evaporation pond
- Groundwater recharge
- Infiltration basin
- Injection well
- Irrigation
- Marine dumping
- Marine outfall
- Reclaimed water
- Sanitary sewer
- Septic drain field
- Sewage farm
- Storm drain
- Surface runoff
- Vacuum sewer

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Pollution

History

Air	○ Acid rain
	○ Air quality index
	○ Air pollution measurement
	○ Atmospheric dispersion modeling
	○ Chlorofluorocarbon
	○ Combustion
	  ○ Biofuel
	  ○ Biomass
	  ○ Coal
	  ○ Joss paper
	  ○ Open burning of waste
	○ Construction
	  ○ Renovation
	○ Demolition
	○ Exhaust gas
	  ○ Diesel exhaust
	○ Haze
	  ○ Smoke
	○ Indoor air quality
	○ Internal combustion engine
	○ Global dimming
	○ Global distillation
	○ Mining
	○ Ozone depletion
	○ Particulates
	  ○ Asbestos
	  ○ Oil refining
	  ○ Polluting cooking fuels
	○ Persistent organic pollutant
	○ Smelting
	○ Smog
	○ Soot
	  ○ Black carbon
	○ Volatile organic compound
	○ Waste

Biological	○ Biological hazard ○ Genetic pollution ○ Introduced species ○ Invasive species
Digital	○ Information pollution

Electromagnetic	○ Light
	  ○ Ecological light pollution
	  ○ Overillumination
	○ Radio spectrum pollution

Natural	○ Ozone
	○ Radium and radon in the environment
	○ Volcanic ash
	○ Wildfire
	○ Transportation
	  ○ Land
	  ○ Water
	  ○ Air
	  ○ Rail
	  ○ Sustainable transport

Noise	○ Urban ○ Sonar ○ Marine mammals and sonar ○ Industrial ○ Military ○ Abstract ○ Noise control
Radiation	○ Actinides ○ Bioremediation ○ Nuclear fission ○ Nuclear fallout ○ Plutonium ○ Poisoning ○ Radioactivity ○ Uranium ○ Electromagnetic radiation and health ○ Radioactive waste

Soil	○ Agricultural pollution
	  ○ Herbicides
	  ○ Manure waste
	  ○ Pesticides
	○ Land degradation
	○ Bioremediation
	○ Open defecation
	○ Electrical resistance heating
	○ Soil guideline values
	○ Phytoremediation

Solid waste	○ Advertising mail
	○ Biodegradable waste
	○ Brown waste
	○ Electronic waste
	  ○ Battery recycling
	○ Foam food container
	○ Food waste
	○ Green waste
	○ Hazardous waste
	  ○ Biomedical waste
	  ○ Chemical waste
	  ○ Construction waste
	  ○ Lead poisoning
	  ○ Mercury poisoning
	  ○ Toxic waste
	○ Industrial waste
	  ○ Lead smelting
	○ Litter
	○ Mining
	  ○ Coal mining
	  ○ Gold mining
	  ○ Surface mining
	  ○ Deep sea mining
	  ○ Mining waste
	  ○ Uranium mining
	○ Municipal solid waste
	  ○ Garbage
	○ Nanomaterials
	○ Plastic pollution
	  ○ Microplastics
	○ Packaging waste
	○ Post-consumer waste
	○ Waste management
	  ○ Landfill
	  ○ Thermal treatment

Space	○ Satellite ○ Air travel
Visual	○ Clutter (advertising) ○ Traffic signs ○ Overhead power lines ○ Vandalism

War

- Chemical warfare
- Herbicidal warfare (Agent Orange)
- Nuclear holocaust (Nuclear fallout - nuclear famine - nuclear winter)
- Scorched earth
- Unexploded ordnance
- War and environmental law

Water

- Agricultural wastewater
- Biological pollution
- Diseases
- Eutrophication
- Firewater
- Freshwater
- Groundwater
- Hypoxia
- Industrial wastewater
- Marine
  - debris
- Monitoring
- Nonpoint source pollution
- Nutrient pollution
- Ocean acidification
- Oil exploitation
- Oil exploration
- Oil spill
- Pharmaceuticals
- Sewage
  - Septic tanks
  - Pit latrine
- Shipping
- Stagnation
- Sulfur water
- Surface runoff
- Thermal
- Turbidity
- Urban runoff
- Water quality
- Pollutants
  - Heavy metals
  - Paint

Topics

- Brain health and pollution

Misc	○ Area source ○ Debris ○ Dust ○ Garbology ○ Legacy pollution ○ Midden ○ Point source ○ Waste
Responses	○ Cleaner production ○ Industrial ecology ○ Pollution haven hypothesis ○ Pollutant release and transfer register ○ Polluter pays principle ○ Pollution control ○ Waste minimisation ○ Zero waste
Lists	○ Diseases ○ Law by country ○ Most polluted cities ○ Least polluted cities by $PM_{2.5}$ ○ Most polluted countries ○ Most polluted rivers ○ Treaties

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Plumbing

Fundamental concepts	○ Air gap (plumbing) ○ Backflow ○ Compatibility (chemical) ○ Corrosion ○ Drain (plumbing) ○ Drinking water ○ Fuel gas ○ Friction loss ○ Grade (slope) ○ Greywater ○ Heat trap ○ Hydrostatic loop ○ Leak ○ Neutral axis ○ Onsite sewage facility ○ Pressure ○ Sanitary sewer ○ Sewer gas ○ Sewage ○ Sewerage ○ Siphon ○ Storm sewer ○ Stormwater ○ Surface tension ○ Tap water ○ Thermal expansion ○ Thermal insulation ○ Thermosiphon ○ Trap (plumbing) ○ Venturi effect ○ Wastewater ○ Water hammer ○ Water supply network ○ Water table ○ Well

Technology

- Brazing
- British Standard Pipe (BSP)
- Cast iron pipe
- Chemical drain cleaners
- Compression fitting
- Copper tubing
- Crimp (joining)
- Drain-waste-vent system
- Ductile iron pipe
- Flare fitting
- Garden Hose Thread (GHT)
- Gasket
- Hydronics
- Leak detection
- National pipe thread (NPT)
- Nominal Pipe Size (NPS)
- O-ring
- Oakum
- Pipe (fluid conveyance)
- Pipe dope
- Pipe support
- Plastic pipework
- Push-to-pull compression fittings
- Putty
- Sealant
- Sewage pumping
- Soldering
- Solvent welding
- Swaging
- Thread seal tape
- Threaded pipe
- Tube bending
- Water heat recycling

Components

- Atmospheric vacuum breaker
- Automatic bleeding valve
- Automatic faucet
- Backflow prevention device
- Ball valve
- Bleed screw
- Booster pump
- Butterfly valve
- Check valve
- Chemigation valve
- Chopper pump
- Circulator pump
- Cistern
- Closet flange
- Concentric reducer
- Condensate pump
- Coupling (piping)
- Diaphragm valve
- Dielectric union
- Double check valve
- Eccentric reducer
- Expansion tank
- Faucet aerator
- Float switch
- Float valve
- Floor drain
- Flow limiter
- Flushing trough
- Flushometer
- Gate valve
- Globe valve
- Grease trap
- Grinder pump
- Hose coupling
- Manifold
- Needle valve
- Nipple (plumbing)
- Pinch valve
- Piping and plumbing fitting
- Plug (sanitation)
- Pressure regulator
- Pressure vacuum breaker
- Pressure-balanced valve
- Pump
- Radiator (heating)
- Reduced pressure zone device
- Reducer
- Relief valve
- Riser clamp

Plumbing fixtures	○ Accessible bathtub ○ Bathtub ○ Bidet ○ Dehumidifier ○ Dishwasher ○ Drinking fountain ○ Electric water boiler ○ Evaporative cooler ○ Flush toilet ○ Garbage disposal unit ○ Hot water storage tank ○ Humidifier ○ Icemaker ○ Instant hot water dispenser ○ Laundry tub ○ Shower ○ water recycling shower ○ Sink ○ Storage water heater ○ Sump pump ○ Tankless water heating ○ Urinal ○ Washing machine ○ Washlet ○ Water dispenser ○ Water filter ○ Water heating ○ Water softening
Specialized tools	○ Basin wrench ○ Blowtorch ○ Borescope ○ Core drill ○ Drain cleaner ○ Driving cap ○ Flare-nut wrench ○ Pipecutter ○ Pipe wrench ○ Plumber's snake ○ Plumber wrench ○ Plunger ○ Strap wrench ○ Tap and die

Measurement and control	○ Control valve ○ Flow sensor ○ Pressure sensor ○ Water detector ○ Water metering ○ Hydronic balancing ○ Hydrostatic testing ○ Leak detection
Professions, trades, and services	○ Mechanical, electrical, and plumbing ○ Pipe marking ○ Pipefitter ○ Pipelayer ○ Plumber
Industry organizations and standards	○ International Association of Plumbing and Mechanical Officials (IAPMO) ○ NSF International ○ Plumbing & Drainage Institute (PDI) ○ Uniform Plumbing Code (UPC) ○ World Plumbing Council (WPC)
Health and safety	○ Plumbing code ○ Scalding ○ Waterborne disease
See also	○ Fire sprinkler system ○ Piping ○ Template:HVAC ○ Template:Public health ○ Template:Sewerage ○ Template:Human waste elimination ○ Template:Wastewater

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About Toilet

A bathroom is a piece of sanitary equipment that gathers human waste (urine and feces) and occasionally toilet tissue, normally for disposal. Flush toilets make use of water, while completely dry or non-flush toilets do not. They can be designed for a sitting

placement preferred in Europe and The United States And Canada with a commode seat, with added considerations for those with impairments, or for a bowing position more prominent in Asia, referred to as a squat toilet. In city areas, flush toilets are generally linked to a drain system; in isolated areas, to a sewage-disposal tank. The waste is referred to as blackwater and the consolidated effluent, including various other sources, is sewage. Dry bathrooms are linked to a pit, removable container, composting chamber, or various other storage and treatment device, including pee diversion with a urine-diverting bathroom. "Bathroom" or "commodes" is additionally widely made use of for rooms containing just one or more commodes and hand-basins. Lavatory is an older word for commode. The innovation used for modern bathrooms differs. Toilets are commonly constructed from ceramic (porcelain), concrete, plastic, or timber. More recent toilet modern technologies consist of twin flushing, reduced flushing, toilet seat warming, self-cleaning, women rest rooms and waterless rest rooms. Japan is understood for its toilet modern technology. Aircraft toilets are specially made to run airborne. The requirement to keep anal hygiene post-defecation is widely acknowledged and bathroom tissue (often held by a commode roll owner), which may likewise be used to wipe the vulva after urination, is widely utilized (as well as bidets). In private homes, depending on the region and style, the commode may exist in the same washroom as the sink, tub, and shower. An additional alternative is to have one space for body cleaning (likewise called "shower room") and a separate one for the commode and handwashing sink (bathroom space). Public toilets (toilets) consist of one or more bathrooms (and generally single rest rooms or trough rest rooms) which are offered for usage by the public. Products like urinal blocks and commode blocks help maintain the scent and tidiness of toilets. Bathroom seat covers are occasionally made use of. Mobile bathrooms (often chemical "porta johns") may be brought in for large and short-lived gatherings. Historically, cleanliness has actually been an issue from the earliest stages of human settlements. However, lots of inadequate houses in creating countries make use of very standard, and typically unhygienic, toilets –-- and almost one billion individuals have no access to a toilet in any way; they must openly excrete and pee. These problems can lead to the spread of illness transmitted via the fecal-oral course, or the transmission of waterborne illness such as cholera and dysentery. As a result, the United Nations Sustainable Development Objective 6 wants to "accomplish access to ample and equitable hygiene and hygiene for all and end open defecation".
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