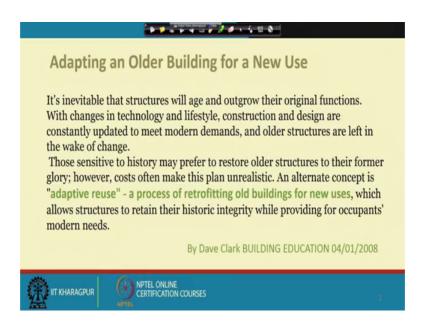
## Architectural Conservation and Historic Preservation Prof. Sanghamitra Basu Department of Architecture and Regional Planning Indian Institute of Technology Kharagpur

## Lecture – 40 Adaptive Reuse

Welcome to our next lecture which is adaptive reuse rehabilitation of heritage structures and historic areas, in the last lecture we have talked about infill or the new buildings in all settings. Today we will talk about if there are certain structures or areas also sometimes which has out leaves it is older original use then we have to find an alternative use to the structure. We have to find means if we are convinced about that it is a significant of significance is that area has significance, so the structure has significance.

So, we will talk about that that what is the adaptive reuse and the rehabilitation of structures and areas or pressings.

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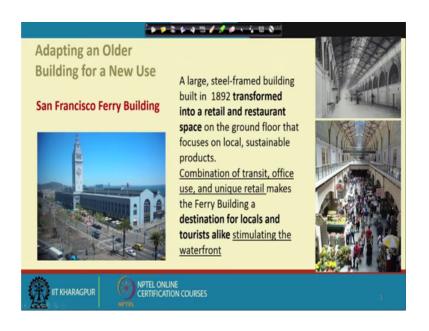


I am quoting from Dave Clark in the building education adopting an older building for a new use is inevitable that structures will age and outgrow their original functions, with changes in technology and lifestyle construction and design are constantly updated to meet modern demands and older structures are left in the wake of change.

Those sensitive to history may prefer to restore all the structures to their former glory; however, cost often make this plan unrealistic, an alternate concept is adaptive reuse a process of retrofitting old buildings for new uses, which allows structures to retain their historic integrity while providing for occupants modern needs.

So, this is what he says and this summarizes the gist of the adaptive reuse or rehabilitation do we also have to understand that we have talked about creating that all types of heritage structures cannot be adopted to newest, but according to the grading according to the provision and significance it is 1 of the most viable option to continue the historic fabric and specially if that is as a significance it has a townscape value or some other significance and it is in a good structural condition Sometimes repair and other things are necessary, but we will see some of the examples.

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Let us talk about some of the example this is san Francisco ferry building, this was a large steel framed building built in 1892 and when it was built it was a very active as a transported ferry terminal that time the golden gate bridge which was not constructed. So, it was the only means of transport and everyday a lot of people used to use this ferry terminal for crossing the way.

Over the time it lost it is significance the bridge came up and not many people were using the ferry as a transport and it became in a very rundown condition neglected and then there was a flyover which came up. So, there is a long history behind that, but now

it is transformed into a retail and restaurant space on the ground floor that focuses on local sustainable products.

So, you can see here that there is the old structure and now it has been converted into a very important food market on the ground floor and what is this now it is now a combination of transit office use and unique retail makes the ferry building a destination for locals and tourists alike stimulating the waterfront.

So, it has become an and it was like lying vacant and neglected for a long time, it is only some of the people and the organization architects town planners they came together and it thought that it must be given a new identity and it will given a identity not to itself, but to the city as a whole the san Francisco it will become a gateway. So, some new users are put in and while putting the new users, it also thought about that it should not just become a tourist destination it should also involve the local people. So, it is a something which is a local sustainable product there is a farmers market every Thursday which is outside that.

So, there was added dream and that dream has come true and because of that the ferry terminal has acquired a new meaning a new function and it is not only for itself. But it is acting as a gateway to the city and because of a determiner in the surrounding area or adjoining area lot of new activities are coming up. So, this is redefining his role and it has got a new significance.

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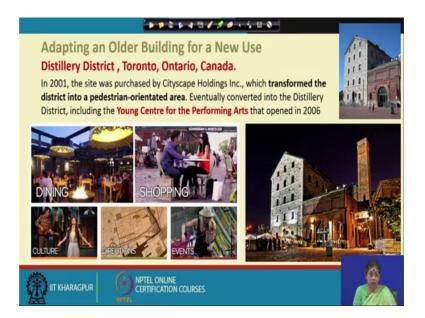
And there are this is another example of adopting older building this is a district actually a older distill distillery district in Toronto Ontario Canada, which is a commercial and residential district in Toronto Ontario in Canada in the main cities in the near the waterfront.

So, I am just in a very short I am talking about the background, it was a gooderham and worts 1 of the largest distiller in Canada the distillery facility on the Toronto waterfront was closed down in 1990. There was a again a tax evasion some stories there are some facts and figures it was not being able to. So, no what happened is that, but the structures were there what is the normal usual way is to demolish the structures, use the very important valuable land for making a news areas.

But it has not done that if they have decided, so in 2001 the site was purchased by the city scape holding incorporation, which transformed the area district into pedestrian oriented area and eventually converted into the distillery district including the young center for the performing arts that opened in 2006.

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So, you can see here the some of the older structures they are still there and most of them are there and they each 1 of them has been adopted to a new use and not only it is again I

am saying it also houses the artists the local out is the local shop owners, it has become a destination for everybody and involving all the stakeholders.

Now, as you can see that it has become a destination area dining shopping culture events a lot of things are happening and you can see that how that old structure has become a vibrant. What is the gain of that is that not only it is keeping the history of that area, but it has some sort of a new identity which possibly could not have been able to be achieved through the new construction, it would have but it will have a different character it would have not talked about or it will not sort of relate 1 to the history of Toronto a very important part.

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Let us talk about some of the so there are many such examples were not only individual structure, but areas have been converted and adapted to the new use, let us talk about some of the Indian example this is a very recent 1 actually in very recently on the February 24, this is a news you can see a slice of Danish heritage was stored and you can see the Danish tavern in Serampore.

Now, just to give you a background than in west Bengal along the Ganges on both sides of the Ganges there were lot of settlements for the Europeans it is called little Europe because, the Danish came there the French people came there the Germans came there Portuguese came there before the Britisher's came and started Calcutta as there east India company.

So, each of the small places had a lot of that heritage of that places there are outskirts of Calcutta, small settlements municipality and at 1 time this place Serampore was known as the Frederick Nagar and named after the king of Denmark and not only 1 structure there was a government building and it is also very important because, there was a Serampore college where William carey and others the really worked for the education had a had a first printing press the working on the Bengali script for the education.

There is a lot of contribution of the people who settle there or and worked for the education system the governance and other thing and these are the remnants. Now it they are very neglected and now this is a we will talk about the few structure 1 is important is the Danish tayern.

So, if you see the history because it was based on a means it was that structure was lying neglected for a long time, nobody really knew the history of that structure not only 1 structure there many structure I am talking about Danish travel also there was a research which was helpful to find out from the old pictures and photographs and settlement that what was there and then it was established historically, that it was the tavern for which some references and writings were available and 1 could identify then this was the tavern.

You can see here the old structure which is there, which was drying in a very neglected condition as I said the you can see the staircase was in a dilapidated condition which has been earlier and now it has been restored and now it will function as a coffee house, that is very important we have all people are waiting for that.

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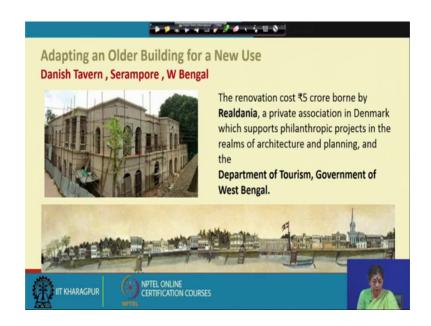
Ah So, here you can see more clearly the local architect is an architect Manish Chakraborty and he sort of that this was the there were Scottish shopkeepers, it is a very dilapidate see if waiting to be demolished and this is what is looking now a beautiful tavern it is still work as a coffee house restaurant there will be some guest houses, this is the interior how it has been done also it has got a new life

Now, how it was possible who paid for that, the main patronage came from Serampore initiative of the national museum of Denmark. So, Serampore initiative was formed because, of to help restoring and adapting some of the structures of Serampore and the main people who are associated is the national museum of Denmark and under their patronage and guidance and also the west Bengal heritage commission I have talked about the act the west Bengal is the only state in India which has a state wise heritage act.

So, they also have done do carry out the listing another and the Indian national trust of architecture and cultural heritage they also took part in that.

So, it is a combined effort guidance that this has been possible to do the adaptive reuse of the structure very ancient structure and it is continues you can see the beautiful river scape what you can see the restoration was going on, the renovation cost 5 crores of rupees.

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Now, own by realdania a private association in Denmark which supports the philanthropic projects in the realms of architecture and planning and the department of tourism government of west Bengal. So, you see there is the NGOs are working the public private partnership is happening and then there is an international collaboration. So, all of this make it possible that such a such an initiative can be successful.

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Ah A gain we can see here that I told you that this is not only that 1 structure there are many structures in Serampore and the other townscape we are talking about Serampore

only. So, here you can see the government house which is also almost nearing completion in west Bengal in Serampore only and you can see the architects are there.

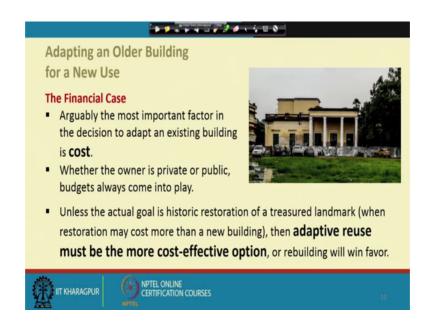
Now, so the nuclear architects is gopa sen who worked on behalf of the west Bengal heritage commission and also you can see the masons and the craftsmen who are there who worked for the project there contribution is very valuable they actually come from murshidabad and work with lime and the original material.

Now, Bente Wolff a project head for the sample initiative and the consultant was architect Fleming Aalund and national museum of Denmark. So, you can see them that when the workshop or the project was going on and after the project where they are standing in front of a newly restored, old wall and before and after and this is almost nearing completion the government; I here that it will be converted into a museum of the Danish history and there are the key intervention when such thing happens there are many other there is a Serampore college, there is the place where William carey used to stay there and there are other temple structures all which is a combination a combine which we call the shared built heritage.

So, there are many more example and I am sure that this will not only have a piecemeal impact, but they will have an impact on the total Serampore and there is also the church which has been restored by Manish Chakraborty, which got a award very prestigious award. So, these are the things which actually show the people that these are the things possible because, the local people are always very proud of their place, but sometimes they dont know what to be done.

Now, so it actually the sender the tourists the local people it can be used for the mini structure. So, these are the in India also there are many many there is adaptive reuse examples are going on.

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I had just mentioned 2 of them and but what is important that whatever you talked about an individual structure, we talk about a heritage state what is important as you say that always the cause the cause financial case that from where the cost will come, that is very important and the not only the cost, but also people talking about the gain that if you demolish the structure, then the land and the new structure will have more floor area. Such consideration cannot happen in adaptive use cost is important, but you cannot really acquire the in terms of the floor area which can be generated.

So, as I say there should be a listing has to be done that this are important and then there should be some overall limitation and bylaws for that area and then 1 can talk about that what are the possibilities an option.

Arguably the most important factor in the decision is to adopt an existing building, is the cost when nobody is denying the cost is important part whether the owner is private or public it does not mean the government also will not think of the cost public or private the budget always comes into play.

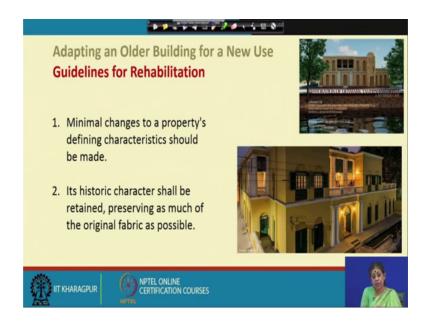
So, 1 has to be very concerned where I mean 1 has to sort of think about that and work in a very judicious manner. But unless the actual goal is historic restoration, so 1 has to first determine that the goal is historic restoration I mean demolishing a building and having a new structure in floor area, a vis that if we demand we keep it what is the cost this cannot be equated first of all we have to be convinced that it has got it is significance it is got his

value and it is better to keep it that is the first and foremost thing, 1 has to say it cannot be equated at par with any other structure.

So, that is a very important part whether we talk about the historic district historic structure or pressing, unless the actual goal is historic illustration for a treasured landmark when restoration may cost more than the new building, sometimes it yes it not only may cost it also requires a different types of expertise.

Then adaptive reuse must be the more cost effective option because, are just restoring into keeping it like this rather than that if you adopt if it is possible then a that is the most possible option, than rebuilding and the ambience of the space the sometimes the structure quality they may look very dilapidated, but most of the times the original materials are quite a good condition the structures and others.

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So, there should be some guidelines for rehabilitation, so you say that cost is there, but 1 has to first establish that this is important this is significance it is a treasured structure present or aside. So, what are the guidelines so this is you can see the tavern which is lighted and it is just complete, the guidelines for rehabilitation. First of all we have talked about the ethics of conservation is same thing the minimal changes to a properties defining characteristics should be made.

Defining characteristics what are the characteristics which define the significance of the structure it may be architectural it may be historical, it may be aesthetics whatever that has to be first made very clear and the documentation and condition mapping a way important part of their even while working on it also keeping the documents are very important.

Its historic character shall be written preserving as much of the original fabric as possible, again the principle of minimum intervention applies there also variable is required 1 can do. But also 1 has to think about as much as possible to go back to the original material original construction techniques because, this becomes a part of the distillation project.

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We continue with the guidelines of rehabilitation we see it is a park mansion in park street Kolkata, which is a not sort of legally identified as a heritage statistics notionally yes. So, there is a park mansion which is parks street which is originally a residential, now it is converted into commercial partly residential and some of the institutes are also there which there is an inner courtyard. So, it is a beautiful building and it has been restored quite well.

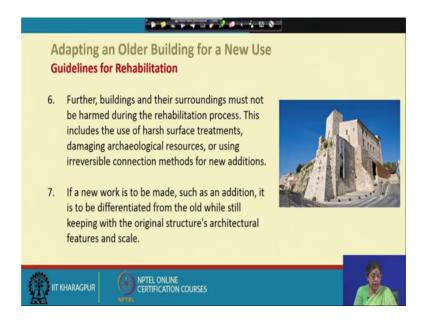
So, such examples are there, so we continue with the guidelines the additions that create a conjectured or false history are not to be made. So, 1 cannot even while adaptive reuses there can be a lot of intervention, but 1 cannot do a conjecture that possibly this was

like that, like in the Danish tab and also they matched that with the original photograph saw that what is happening there may be some addition alteration later on. So, they also thought that what should be removed what should be kept what should be restored, so each and every material is very important every element or component is very important.

So, the addition that have actually be made throughout a buildings life should be preserved, as we say we have already discussed that the all layers of history are very important until and unless is very by taking out some things more important facade is or aspect is discovered or exposed in I have heard, that in the Danish taverna also there was a wall which came up later and the architects has to decide how it will be interpreted. So, the people have to come and they have to understand that this is from a different period.

So, we will talk about that interpretation later on, as much as possible the building element should be repaired than the rather than replace. So, these are again following the ethics of conservation, as much as possible it should be repaired it may be painstaking it may be little more costly, but still that is the ethics because that is why we are doing it taking this project after all. So, repent rather than restore and if an element cannot be repaired then a replacement must be identical in appearance and material to the original. So, these are again the some of the ethical principle or guiding principle, which have to be kept in mind when we are talking about.

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You continue with the guidelines further buildings and this surrounding must not be harmed during the rehabilitation process, because sometimes we are making it some use where we need parking we do not have to just put a garden to make it beautiful.

We even in the seating it is very important from the old documents photographs and other that what was the original setting, 1 has to be very cautiously working on that ah; landscape architects role is very important landscape conservation architect. This includes the use of hard surface treatments a one should not because whenever there is a historic structure it most of the time there will be the archaeological remains in the surrounding area.

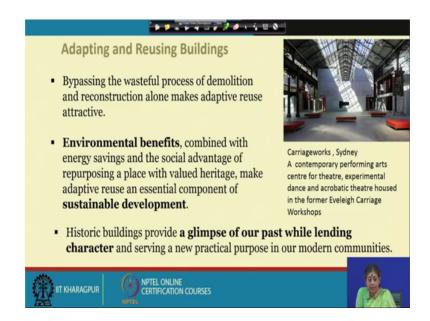
So, 1 has to be very clear about that they should not damage the archaeological evidence or using irreversible connection methods for new addition and one must remember I have not shown this example, but sometimes it is also possible that you have to make a new annex here a new addition to an old structure.

It never is I mean it is not there is no rule that it has to imitate those structure, rather we say that the new annex should actually be a new interpretation or it should belong to today's age, but it should harmonize it is almost like the principles what we talked about the in film.

Like here in for example, if you see an old fort or a castle it has been converted into an art gallery or art museum and beautifully done I am sure that inside is also beautiful, but it does keep not only the surrounding it has kept the surrounding and it has also used the original structure and the inner spaces and other things.

So, it says that if a new work is to be made such as an addition it should be differentiate from the old, while still keeping with the original structures architectural features and skill. So, that goes for you make a new wall new annexy or a maybe to make it more user friendly for the senior citizens or for making it for the accessible to all because, it is a public building there are certain to make it a far resistant probably it requires new additions and that has to be kept in mind and they have to be taught in a very creative way in and they are very important part of adaptive reuse, structural aspects are also important.

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But adapting and reuse building what is the final 1 should understand that what are the final gain of this that, it is bypassing the wasteful process of demolition and reconstruction along makes adoptive reuse attractive. So, yes there are historic architecture say, but 1 also has to think that these resources if they are we are recycling a resource if the resource is there a and rather than demolishing it and then making a new structure, we are reusing or recycling a resource which is a space structure and other thing and that sort of a takes away that wasteful process because demolition also needs money 1 has to think about that and it is not very easy, but these are the.

So, there are environmental benefits combined with energy savings, most of this historic structure are very their passive energy control is very important, they are almost there compared to the new structures. So, energy savings and the social advantage of repurposing a place repurposing a place with the valued heritage; that means, there is an old structure which has his original use probably that uses no longer there. So, we are giving a new meaning new life new purpose to that which also helps this surrounding area the context.

Make adaptive reuse an essential component of sustainable development, if you remember the history of conservation movement I would say that how it has shifted from monument centric approach through the area based approach and very recently his talking about a sustainable development; these are generally if you really talk about the

energy preservation conservation the use, the passive energy most of these structures are very good and they are a good examples of sustainable development with new intervention a little intervention. It can be retrofitted to a new use and a much more comfortable way.

Again I am saying that it is not an used 1 has to be very sensitive, it cannot be how we treat the new buildings 1 has to be sensitive to the particular challenges of the old structures. Historic building finally, why it is important is the historic building provide a glimpse of our past, while lending a character and serving a new practical purpose in modern community and this is the finally the benefit of adapting old structures areas or pressings to a new use

Here we can see a there many examples there, we see that is in Sydney a carriage works, where a contemporary performing our center for theatre experimental dance and acrobatic theatre housed in the formal carriage workshops.

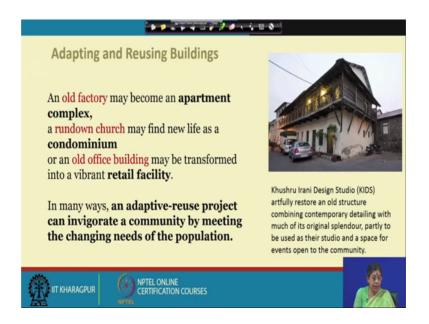
So, because it had a lot of space and that huge space rather than again constructing the space this space which is a factory, can become I have seen in Berlin that near the station there are a lot of godowns and this godowns are now become a artists area because, nowadays the artists they use a lot of animation projection and other they need a huge space. Rather than constructing this spaces this godowns they are converted into the (Refer Time: 26:20) and now it has become a very vibrant area and different environment and ambience which is given, you do not have to make it you just retrofit that for the new use another sometimes.

So, even matching the new use with the old structure is very important because, we have to see that what that old structures value significance what it offers, what are the structural possibilities which are there. So, rather than changing it totally I am facade retention is not a very viable option, it is viable many of the cases done what not a very desirable option. But other than trying to use the space the ambience of the space suppose it says a beautiful roof do not cover it with fall ceiling because, then the that experience ambience sort of a is losers.

So, 1 has to find if 1 sort of takes an effort or gives an effort to see that what is the most befitting use of that space, keeping the significance it probably 1 of the best way of not

only keeping our history alive. But I am also maintaining it because the maintenance will be a part of that new use, but also giving us a glimpse of our history.

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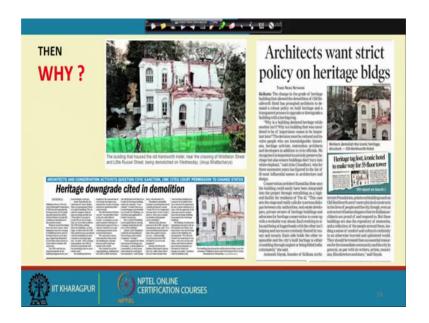
But so we see a old factory can become an apartment complex or rundown charge may find a new life as a condominium and old office building may be transformed into a vibrant retail facility, but please remember the grading is very important the very important structures are not generally adopted it is the grade 2 grade 3. So, these provisions are there when the listing is done that which other structures can be adopted to the new use.

For example this is an example from Pune the Khushru Irani design studio, it is artfully restored an old structure combining the contemporary detailing with much of his original splendor, partly to be used as their studio and a space for events open to the community and it definitely stands out the different type of office space and other.

So, there are so many options which are possible. So, many examples are there so in many ways an adaptive reuse project can invigorate a community by meeting the changing needs of the population. So, we are not talking about a museum city or a museum place or a frozen reservation, we are talking about the change a change which is sensitive a which is contextual and which is slow is not drastic.

So, have a dialogue between the 2, in that way the adaptive view is a is very important because then it do not have to it does not become a white elephant it takes care of his and sometimes it brings more money and a in a long run in a short term may not but in a long run, because of his identity that means, it not only brings more it is money to the things, but money is not everything. But I am saying financially it should be a viable project, but sometimes it also helps to change ambience of the surrounding area. So, that is the advantage of the adaptive deals

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But then why we still see that the old structures are being demolished, this is a very recent case in Calcutta; where a old Kenilworth hotel you can see the news, which is near the crossing it was has his own heritage is 1 of the old hotels there and which is being demolished and it has been demolished by a promoter or developer who has purchased and who is building a very high raised structure nearby and they are demolish it to make a new high way structure in that area.

This was a listed structure and this I want to bring to your attention, that it was a listed structure; according to the listing it could not be demolished, but what happened is that because of some should I say the some sort of a inner working that it was downgraded to a category which allows demolition and just keeping a sort of a that is in Calcutta this type of grades 3 or grades c, we say that you can demolish the structure, but you can just give a signboard that it was a heritage structure.

It is very funny and that has been done and it is grading has been a downgraded. So, and it is become an I owner the people are working for that they are protesting against that that how this could happen such an important structure which is a part of the history of Kolkata and not really a beautiful structure it was it has a lot of history a lot of very famous people came and stay there over the years more than 100 years.

So, architect now say that let this be an eye opener architects wants a strict policy on the heritage building. So, that brings into the focus, though that a not only we should know the means we should also be sensitive, we should also find out a feasible option and the peoples role the local people the conservation architects the stake holders. They must form a voice and show people that what are the possibilities of that.

So, that is what we call democracy the participation of the people from the different works of life into the heritage process, so this is also an important factor when we are talking about the advocacy the participation and making a movement making people aware that these are the happenings and there are other options like adaptive reuse or infill.

So, adaptive reuse a options as we have talked about there are many good examples, where it in a long term it brings a lot of identity it becomes a very financially viable, it creates a distinct identity the like the ferry terminal it has not only helped to keep that. But it has got a new life new meaning not only to itself, but the entire area, we have talked about the distillery districts, the I am sure Serampore will show a way which is very a close to Kolkata that how this collaborative effort from the practitioners and the people can create a new meaning and give a new life to this heritage structures through adaptive reuse.

Thank you.