



A A P-neu! D.I.Y. Playable10

P-neu! is an adaptable, replicable playscape that takes reused tires and community energy to transform small urban spaces into inventive pocket playgrounds. P-neu! creates a compact, multifunctional laboratory of interactive social and sensorial play for ages 2-10. Active areas are for climbing, balancing and rolling. More quiet activities include crawl spaces, drawing surfaces and thinking places. P-neu! is designed to be accessible to all, simple to construct and look cool. Whole tires become layered tunnels while deconstructed tire treads wrap the tunnels into animated topography. Elements are modular for flexibility and can be disassembled, rolled up, relocated or stored.

P-neu! likes to play > let's P-neu!

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CONCEPT : story

Reconsider, Reuse, Recycle, Reveal

P-neu! is envisioned for do-it-yourself by taking a commonly discarded object and reinventing it into something extraordinary. P-neu! takes old tires and sees exciting new possibilities :

> Tires are easy to get and need recycling all over the world. Tires are available locally everywhere in recycling centers, junk yards and garages for FREE !

> Many people know that tires are ideal for kids and construction. They are soft, strong, flexible, bouncy, light, waterproof, washable ... P-neu! is inspired by kids worldwide who already find incredible fun with tires.

> When was the last time you really looked at a tire ? Tire treads are patterns - textured, varied and tactile. The round shape is playfully in motion. P-neu! discovers that tires are beautiful ... and deconstructing them reveals a bonus kit of parts.

Small City Spaces

P-neu! brings more play to more urban areas. Open space is a major challenge in cities. P-neu! is especially designed to fit in a wide variety of small spaces, for a wide variety of small people. P-neu! is easy to duplicate in the neighborhood scale - to transform dense neighborhood schools, parks, plazas, rooftops, alleys and even streetscapes into pocket playscapes. P-neu! can be installed on any type of ground surface but works particularly well with all types of hardscapes. P-neu!'s versatility and stability comes from a combination of tension, base wedges and unique skin of deconstructed tires that hold the structure together. It does not require any digging or footings.

Collective Energy

P-neu! is play with a sense of community. Community process is impressive and the group experience is often as important as the result. P-neu! is designed around the spirit of people coming together to construct something with collective hands. P-neu! is an event - built by neighboring families, teachers, students and friends.

Innovative Uses, Innovative Users

P-neu! is an experiment. P-neu! explores play that is accessible to all, creative, multifunctional, interactive, simple to construct, compact, durable and looks cool. Elements are modular for flexibility and can even be disassembled, rolled up, relocated or stored. Most of all, P-neu! is a laboratory of expressive play possibilities at kid scale, with kid perspective.



PROJECT : perspective view



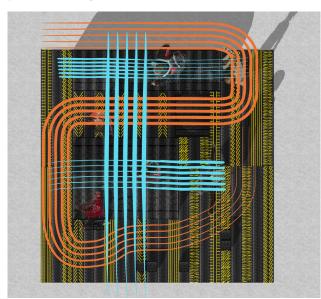
P-neu! in action under urban overpass

P-neu! has the ability to transform a wide variety of city spaces into animated playscapes. You can P-neu! almost anywhere. Imagine temporary installations for events in streetscapes and plazas as well as more permanent construction in schools and parks ...

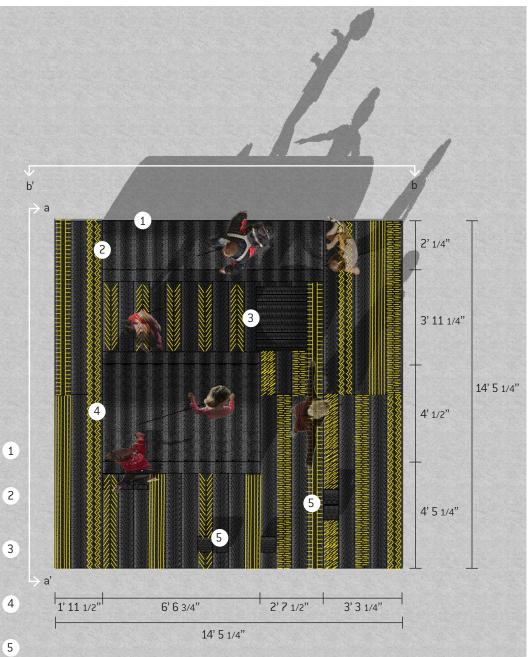
PROJECT : plan view

FLOW : diagram

P-neu! is about play in **motion**, for everyone. Dimensions of entrances, paths, drawing and textural surfaces are wheelchair accessible



- OPTIONS: active, quiet, social & sensorial play ...
 - Scribble wall
 - draw, feel, touch ...
 - 2 <u>Tunnel A</u>
- crawl, hide, seek, rest, touch, climb, roll, balance, slide, jump ...
 - Roller (s)
 - push, pull, carry, **roll**, ride, balance, **move** ...
 - Tunnel B
- climb, balance, roll, slide, crawl, hide, seek, stretch, sound, feel ... Waves
 - balance, **bounce**, sound, **rest**, draw ...



scale : 1/4" = 1'0" D.I.Y. Playable10, 302815629, AMA P-neu!



scale : 1/2" = 1'0"



scale : 1/2" = 1'0"

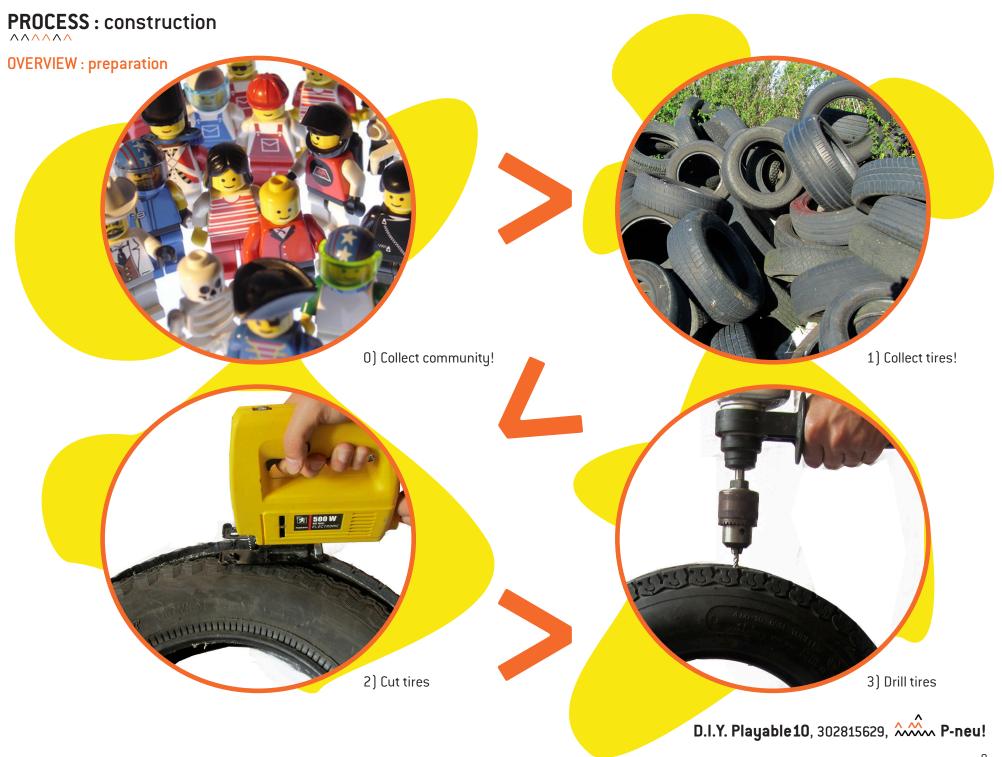
PROCESS : materials & tools

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	Materials	
	1) Recycled standard car tires	
x44	P195/60R15 (tire A)	
x54	P215/60R16 (tire B)	
	2) Lumber (wedges)	
x3	new/reused 7"x 9" x 7' lumber (FSC certified, untreated),	
	cut lengthwise angled on the diagonal into equal halves	Lumber
	3) Standard round headed bolts with matching nuts	tire A tire B
x122	3/8" x 3" (tread to tread)	
x8	3/8" x 36" (thread rods through sidewall rings)	
x130	4) Standard washers (3/8" to match bolts)	
	5) Standard screws	Screws Zintios Paint
x272	3/8" x 3" (tread to wood)	Bolts, nuts & washers Zipties Faint
	6) Zipties	
x64	24" black heavy duty cable ties (tread to tread of floor)	
x1	7) Bucket of yellow paint (exterior or tire)	
	<u>Tools</u>	
x1	1) Electric drill with drill & screw attachments	Electric drill
x1	2) Electric jigsaw	Electric jigsaw
x1	3) Heavy duty utility knife with replacement blades	Saw
x1	4) Saw / Hacksaw	Utility knife
x1	5) Screwdriver (match bolts & screws)	Screwdriver Adjustable wrench
x1	6) Adjustable wrench	
x1	7) Measuring tape	Chalk
x1	8) Outdoor extension cord	
x1	9) Box of chalk	Extension cord Small paint brushes
x10		Measuring tape

P-neu! encourages people to reconsider and sustain their environment with the reuse of spaces and materials. P-neu! is easily replicable, especially for under used city places. P-neu! reinvents one common material for construction in several uncommon ways. P-neu! is made almost entirely of reused tires. With some cleaning and cutting, they are ready to P-neu! Tires come in a wide range of sizes and P-neu!'s instructions for construction are based on two popular sizes for passenger cars in the United States. Design dimensions are simple to adjust for other sized tires. P-neu! is designed to be built by hand, yet using some basic power tools helps! The list of tools and minimal amount of additional materials should be easily located at and loaned from local hardware stores, an neighbor's tool kit, community center or the nearest tool lending library.

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PHASE 1 : preparation

Step 0

x10 Collect community !

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x98 Collect tires ! (& wash)

V

<u>Step 2</u>

x54 Cut tires:

> Using a utility knife &/or jigsaw, cut tread off of tire A by removing sidewalls on both sides of tire. This will create three pieces : 2 reinforced sidewall rings & one 7.9" x 86.6" tread segment for skin. (The skin is used to create floor, wrap topography & help hold structure together)

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Step 3

Connect the rings:

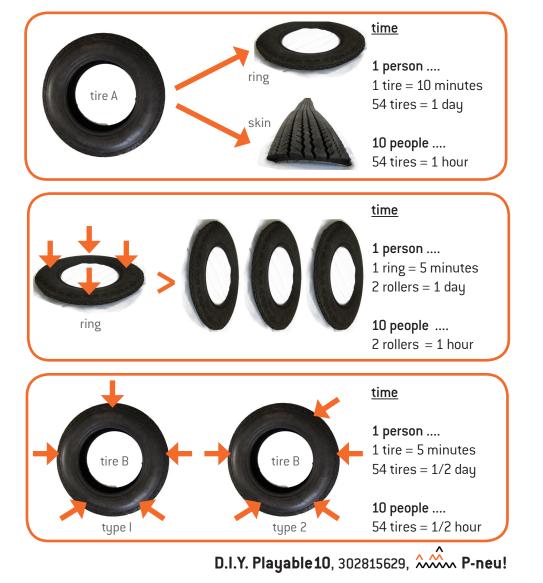
- > To construct roller elements, drill 4 holes in all rings as shown
- > Assemble roller 1 by stacking rings together & bolting with thread rod, washers & nuts
- x108 > Repeat for roller 2 (each roller is made from 54 rings)

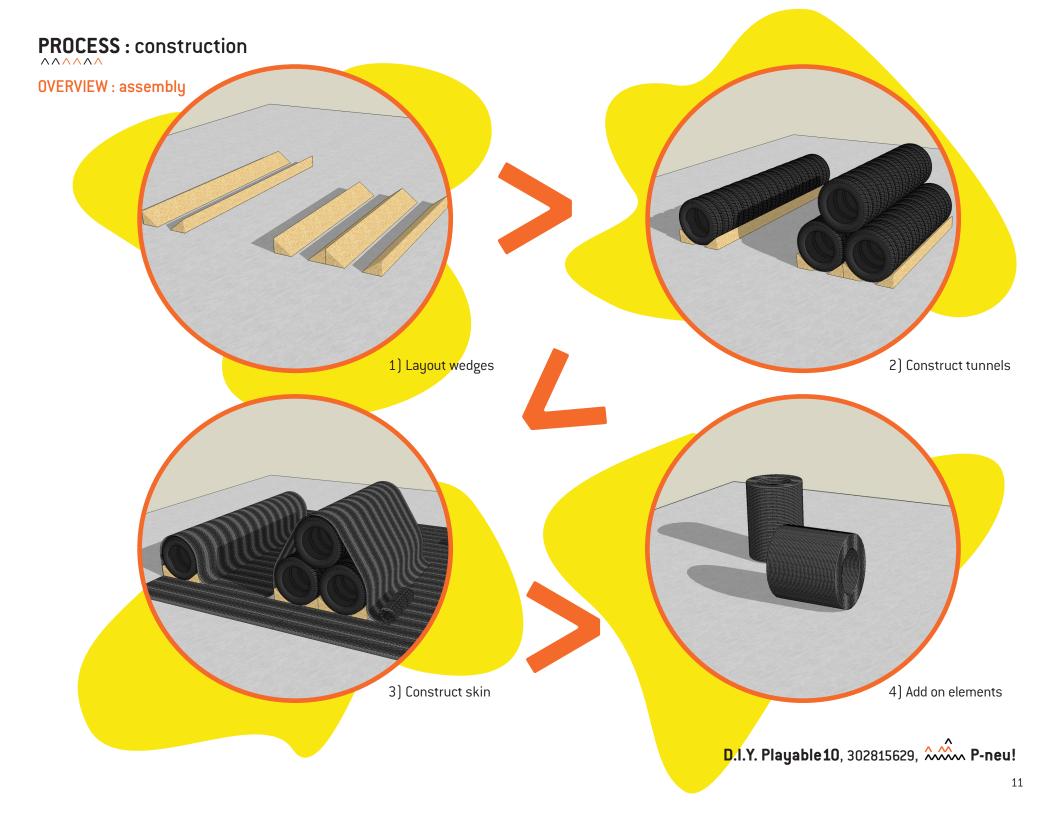
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Step 4

Drill tires:

- > Tires B will be drilled two ways (type 1 & type 2 as shown)
- > Mark 24 tires with chalk to be drilled as **type 1** & mark 20 tires to be drilled as **type 2**
- x44 > Predrill 5 holes in tires as shown with electric drill (note that additional holes may be drilled for drainage as needed)





<u>Step 1</u>

Ready:

x1 > To setup the space ...

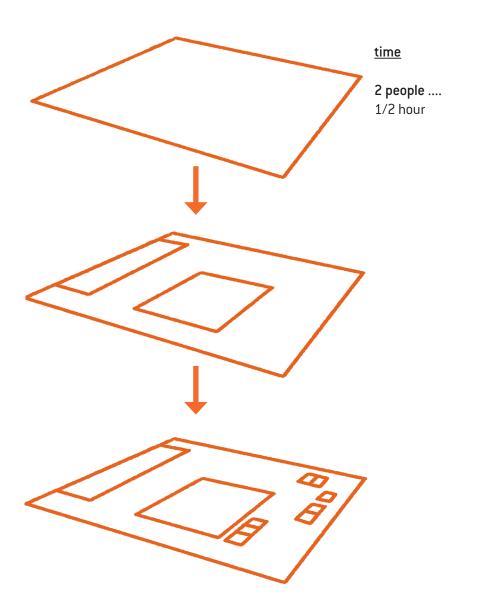
> Use chalk & measuring tape to layout 14' 5 1/4" x 14' 5 1/4" footprint (note dimensions & layout can be configured for different spaces as needed)

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x2 > Layout external dimensions of tunnels within footprint, mark with chalk

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x8 > Layout dimensions of waves within footprint, mark with chalk



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x6

Step 2 Get set topography:

- > To construct tunnel structures ...
- > Layout lumber on outline of both **tunnels A & B** in footprint to create base wedges
 - > Beginning with <code>tunnel A</code>, set a <code>type 1</code> tire upright inside of wedges
 - > Anchor tire to wedges through predrilled holes with screw

> Continue with **tunnel B** in similar way, setting two **type 2** tires upright & adjacent to each other inside of wedges to form two bottom rows. Make sure the predrilled holes to connect the tires are lined up

- > Anchor tire to wedges through predrilled holes with screw
- > Connect tires together through predrilled hole with bolt
- > To form upper level, set a **type 1** tire directly center on top of lower level
- > Bolt upper level to lower level through predrilled holes

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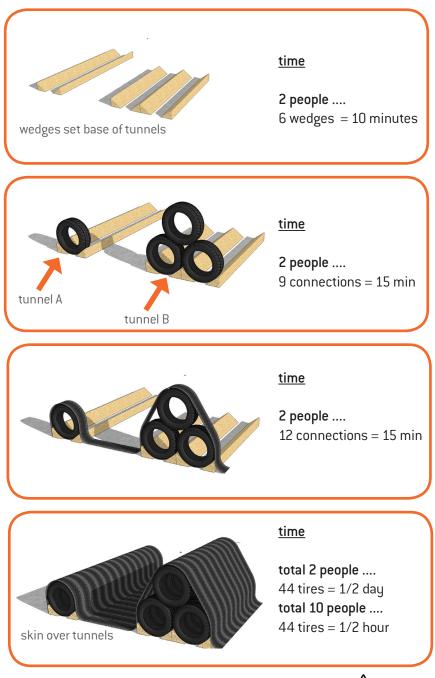
- > To construct skin over tunnels (as shown in layout plan on page 14) ...
- > Beginning with tunnel A, lay one section length of skin over tire so that tread of skin & tire match in direction (this segment will cover path between tunnels)
 > Drill holes in skin to line up with predrilled holes in tunnel. Attach skin to top & sides of tunnel with bolts & nuts
- > Anchor skin to base wedges on either side of tunnel A with screws
- > Smoothing skin between tunnels, anchor to wedge of tunnel B with screws

> Continue with ${\bf tunnel}~{\bf B},$ lay skin one section length of skin over tire so that tread of skin & tire match in direction

> Drill holes in skin to line up with predrilled holes in tunnel. Attach skin to top & sides of tunnel with bolts & nuts

> Anchor skin to base wedges on either side with screws

x44 > Repeat all steps to complete tunnels



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Step 3 Get set floor:

> To construct the floor with remaining skin (as shown in layout plan below) ...

> Lay remaining segments of skin on floor around tunnels so that treads of the skin run the same direction as treads on tunnels. Trim to fit footprint as needed

> Using electric drill, drill 3 holes in skin along center line at middle & at each end of segment

> To connect segments, smooth skin & attach segments of skin to each other by threading zipties through holes. Tie straight across at centers & ends & then in "X" pattern at intersections as shown

x96 > Repeat to connect all floor segments

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> To construct waves ...

> Mark placement of waves with chalk

> Using electric drill, predrill holes into skin of floor

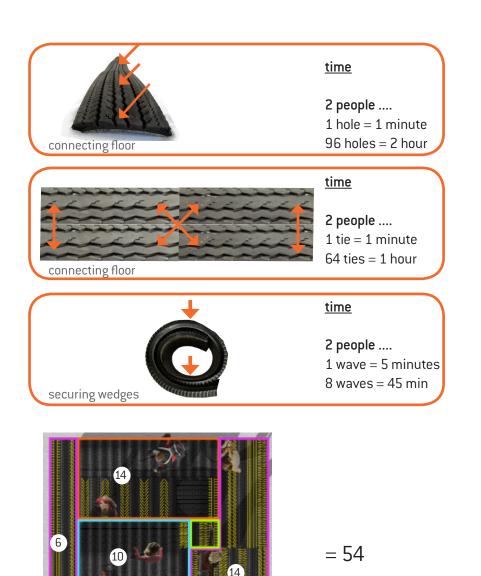
> Using electric drill, drill holes at top & bottom of waves as shown

> Bolt wave at top to secure roll

> Using electric drill, drill hole into skin

> Bolt wave in place on floor

x8 > Repeat for all waves



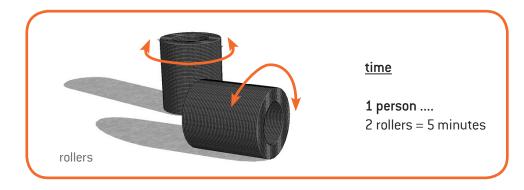
layout of skin: distribution of tread segments

10

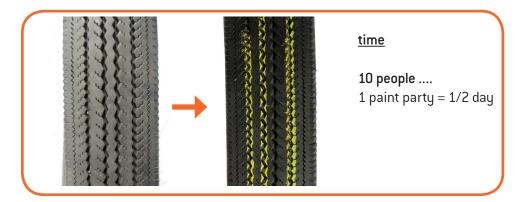
Step 4 Add on:

> To finish ...

x2 > Bring in movable roller elements



> Bring in paint (& kids), trace cracks of the treads on the floor with color. Kids should decorate the rest of P-neu! as they like (chalk works great)



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<u>Step 5</u>

Go:



PROCESS : cost

HOW: much ?

MATERIALS DESCRIPTION detailed listing of specifications on page 8)	QUANTITY	UNIT	COST	TOTAL		
Recycled standard car tires	x98	each	FREE!	0		
Lumber	x3	each	\$30.00	\$90		
Bolts 3/8" x 3"	x122	each	\$0.50	\$61		
Thread Rod 3/8" x 36"	x8	each	\$9.00	\$48		
Nuts	x130	each	\$0.25	\$33		
Washers	x130	each	\$0.15	\$20		
Screws	x272	each	\$0.05	\$136		
Zipties	x1	100 pack	\$12.00	\$12		
Paint	x1	gallon	\$20.00	\$20		
Collective spirit	x2 days	10 people	FREE!	0		
			TOTAL =	\$420	ΛΛ	

P-neu!'s estimated budget is based on materials costs only, without taxes. P-neu! uses recycled and inexpensive materials. Some additional variable costs, like transportation, should be expected. Tools should be easily located at and loaned from hardware stores, neighbors, community centers or tool lending libraries.



> P-neu! is fun, adaptable, simple & inexpensive : just add human energy ...





P-neu! replicated for play in a neighborhood plaza

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